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Sixtieth Annual Report

of the

Director of Public Health for the Government of Bombay

For the Year 1923

With Appendices, including the

Annual Report of the Sanitary Board, Bombay Presidency

and the

Annual Reports of the Health Officers of the Ports of Bombay, Karachi and Aden

[Price—Re. 1 As. 3]

BOMBAY
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1924

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gitized with financial assistance from t
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ANNUAL SANITARY REPORT, 1923.

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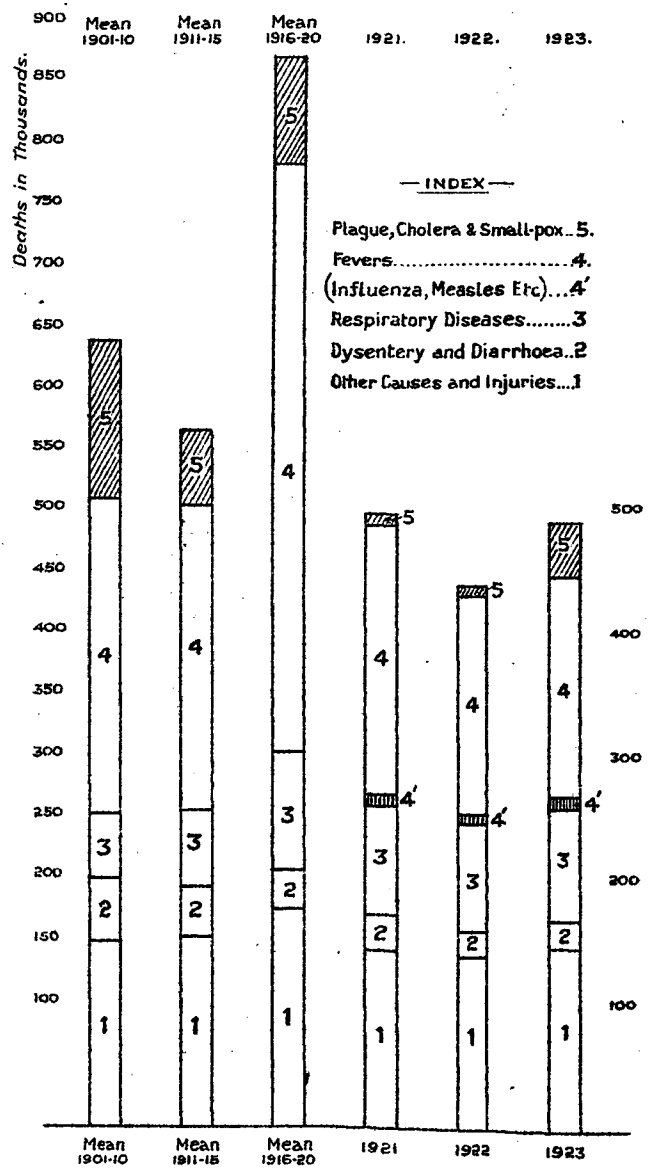
TOTAL DEATHS AND DEATHS BY CAUSES IN 1923 COMPARED WITH 1922 AND PREVIOUS YEARS.



ANNUAL SANITARY REPORT FOR 1923.

SECTIONS I TO IV.

No remarks.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

Note.—The birth and death ratios are calculated on the census population of 1921 :—Europeans 19,247 ; Anglo-Indians 10,221 ; Indians 19,165,614 ; Total population of the Bombay Presidency—19,195,082.

1. *Europeans.*—318 births and 232 deaths were recorded against 316 and 268 in 1922 equal to a calculated birth-rate of 16·52 per mille against 16·42 in 1922 and a death-rate of 12·05 against 13·42. Of the births, 163 were males and 155 females against 164 and 152 in 1922 and the deaths were 149 males and 83 females against 166 and 102. Ten of the deaths were due to injuries, 33 to fevers, 25 to dysentery and diarrhœa, 45 to respiratory diseases and 110 to other causes as compared with 13, 37, 29, 53 and 132, respectively, in the previous year.

Bombay City shows a fall in mortality amongst Europeans—121 male and 55 female deaths against 130 and 71 in 1922. It produced the sole cholera death, the two plague deaths and 4 of the 6 small-pox deaths for the whole Presidency. As that City holds 11,287 or 59 per cent. of the European population as well as 4,675 or 46 per cent. of the Anglo-Indians, its mortality controls the rates for the Presidency.

2. *Anglo-Indians.*—222 births and 218 deaths were registered against 182 and 211 in 1922. The birth and death ratios per mille for the year were, therefore, 21·72 and 21·33, respectively, compared with 17·81 and 20·64 in 1922. Male Anglo-Indian births (122) exceed those of the previous year by 40, while the total figure of female births remains the same—100. Of the 218 deaths, 8 were due to injuries, 26 to fevers, 32 to dysentery and diarrhœa, 51 to respiratory diseases and 98 to other causes, against 5, 29, 18, 52 and 101, respectively, in 1922. The deaths recorded from epidemic diseases were : cholera 2, small-pox nil, and plague 1 against 2, 1 and 3, respectively, in 1922.

The Bombay City contribution to the Anglo-Indian mortality was 89 male and 80 female. These include two (both cholera) of the infectious diseases deaths.

3. *Registration areas and Indian population.*—The Presidency is divided into 5 Registration districts comprising 28 Collectorates (including Bombay City), 251 Rural Circles (Taluka or Mahal), 106 Town Circles, and 9 Cantonments. Seven Cantonments in Native States also submit returns. One additional town circle, viz., Yawal in East Khandesh, is the only change during the year. These divisions are shewn in the annual Forms in Appendix IV of this report.

The 1921 Census shewed the Indian population of the Presidency including Sind as 19,165,614. The population of the Rural Circles was 15,421,829, Town Circles 3,663,048, Cantonments in British territory 80,737 and Cantonments in Native States 111,391 persons.

Births.

4. 681,910 births were registered showing an increase of 61,140 over the figure for 1922 and of 26,575 over the decennial mean. The number of births recorded in previous years and the corresponding birth-rates are as follows :—

	Births.	Birth-rate.		Births.	Birth-rate.
1901–1910 mean ..	*617,736*	*33·42*	1918 ..	619,224	31·61
1911 ..	705,090	36·00	1919 ..	546,460	27·90
1912 ..	684,890	34·97	1920 ..	593,175	30·28
1913 ..	684,803	34·96	*1911–1920 mean*	*669,799*	*34·20*
1914 ..	733,076	37·43	1921 ..	624,640	32·59
1915 ..	726,780	37·10	1922 ..	620,770	32·39
1916 ..	704,672	35·98	1923 ..	681,190	35·58
1917 ..	699,823	35·73			

It will be noted that the birth-rate suffered a severe setback by the influenza pandemic of 1918 deleting as it did the younger women more especially. This setback in births has all but recovered as the above table shows.

5. For the Presidency proper excluding Bombay City and Sind, the birth-rate was 39·91 against 36·18 and for the Province of Sind 22·19 against 20·46 in 1922. The rates recorded in other parts of India are :—

Bengal	29·9	Bihar and Orissa ..	37·02
Madras	33·1	United Provinces ..	36·04
Assam	28·82	Punjab ..	43·16
Burma	29·52	Central Provinces ..	45·63

6. In the Presidency proper excluding Bombay City, the birth-rate for rural areas was 41·57 and for urban areas 29·89 against 37·48 and 28·33, respectively, in 1922.

For rural areas 178 or as many as 94 per cent. of Talukas, pethas and mahals returned birth-rates over 30 per mille of population—93 such areas yielding figures above 40 per mille. The rates varied from 81·24 in Pathardi petha in Ahmednagar and 67·66 in Nandgaon in Nasik district to as low a figure as 17·90 in South Salsette in Bombay Suburban district and 16·26 in Poona City taluka. Amongst others shewing low rates are 23·71 in Malcompeth in Satara District, 26·98 in Navalgund in Dharwar and 27·33 in Bassein in Thana District.

7. Forty-four or one over half of the towns returned birth-rates exceeding 30. In general the Guzerat towns shew higher rates, *e.g.*, Borsad 55·47, Dholka 46·99, Broach 45·39, Umreth 44·99, Ahmedabad 40·86 and there are 7 elsewhere over 40—Nasirabad 50·70, Parola 46·60, Guledgud 42·14, Honawar 41·36, Ranebennur 41·06, Gokak 40·64, and Erandol 40·11. At the other end of the list we find Satara recording a birth-rate of only 8·46, Poona Suburban 11·67, Kurla 13·24, Karad 15·64, Godhra 16·01 and Poona City 16·37, as was the case last year. Thana 17·54 now falls close to this list. Inefficiency in registration on the part of the municipalities must be the main factor in producing these inordinately low rates. The default on the part of the few goes towards vitiating deduction on the vital statistics of municipalities generally.

8. The births recorded in Bombay City, total 20,664 or 509 more than in the previous year, are equivalent to a birth-rate of 17·99, against 17·54 in the preceding year.

9. Sind recorded 72,364 births, an increase of 5,650 over the figure for 1922 and of 1,500 over the decennial mean. The increase is shared by 5 of the districts, two districts—viz., Hyderabad and Larkana—shewing a decrease. The birth-rate for the Province was 22·19 against 20·46 in 1922. The urban birth-rate (35·49) once again greatly exceeds the rural 19·80 (in contrast to the Presidency where the reverse is invariably the case). This is in all probability merely a reflection of the greater default in registration in rural areas as commented on in previous reports. The revenue tapedars are the registering agency and amongst their many duties this is the one that can be conveniently neglected. Thus of the 61 Talukas and Mahals in Sind, only 4 returned birth-rates above 30, viz., Mithi (33·19), Sukkur (32·65), Nawabshah (31·74) and Diplo (30·01). Twenty-five returned rates between 20 and 30 and the rates for the remaining 32 or 52 per cent. of the total were all below 20 per mille of population. Of these, excessively low rates—of 14 per mille and under—were returned from nine of the areas in Karachi District and from 4 of those in Hyderabad. Such rates as 5·17 in Tatta, 7·26 in Ghorabari, 8·47 in Shahabunder and 7·15 in Badin calculated on the census population of two years previously, can only spell the virtual neglect of registration in those talukas.

The efficiency of registration in the Urban Circles of Sind varies. Karachi (43·69), Hyderabad (41·05), Ratodero (40·42) and four others show birth-rates exceeding 30 per mille for the year under report. Nine shew rates between 30 and 20 and the remaining three recorded, according to their custom, rates that indicate extreme default, viz., Mirpurkhas, Tando Adam and Kotri with 8·67, 11·57 and 17·40, respectively. That registration in these towns can be improved to a point that will yield an index of the local health and a guide to the executive is shewn by the sustained improvement in the case of Hyderabad in the last 4 years.

10. The birth-rate in cantonments is mainly controlled by the bulk of the resident civilian population. Nagar (30·01), Karachi (28·35), Ahmedabad (16·62) and Kirkee (14·77) again show the highest rates while for the remainder the figure was below 10, Santa Cruz (2·76) being the lowest.

11. *Births according to Sex.*—Out of 681,910 births, 354,890 were males and 327,020 females, equal to ratios of 18·52 and 17·06. In 1922 there were 323,631 male and 297,139 female births or ratios of 16·59 and 15·50. The percentage of male to female births is thus 108·52, the previous year's figure being 108·91. The percentage of male to female births registered varied from 101·77 in Broach District to 135·47 in Nawabshah District.

This is one of the problems of demography that remains unexplained. In Sind where the excess of male as compared with female births registered is extreme, it has been suggested as an explanation that the girl child

being the less welcome visitor, her arrival is liable to remain unrecorded. The Assistant Director of Public Health, Sind, however, states that after specially investigating the matter in the course of his touring, he finds no preponderance of default in the registration of female births. Moreover, it will be noted that Sind shews also a high proportion of male to female deaths.

12. *Still-births.*—11,221 still-births were registered or 1·65 for every hundred live births. The corresponding figures for 1922 were 10,809 and 1·74 respectively. The percentage of still-births to live births recorded varied from ·15 for Satara District to 9·33 for the City of Bombay. For other areas, Kanara (5·11), Dharwar (3·48), Kolaba (2·95), Bijapur (2·60) and Karachi (2·39) show the highest percentages.

Deaths.

13. 496,244 deaths were registered against 452,581 in 1922 and 689,072 the decennial mean. Comparison is shewn in graphic form at the beginning of this Section. The totals for other years are shewn in the following table :—

1901–1910 mean	..	*639,483*	1919	..	637,170
1911–1915 mean	..	*539,836*	1920	..	516,296
1916	..	652,584	1921	..	498,350
1917	..	798,406	1922	..	452,581
1918	..	1,724,674	1923	..	496,244

14. The recorded death-rate for the whole Presidency works out to 25·89. The death-rate in 1922 was 23·61, the decennial mean being 35·95.

For other parts of India, the death-rates recorded are as follows :—

Madras	..	22·2	Bihar and Orissa	..	25·04
Bengal	..	25·5	Punjab	..	30·94
Assam	..	23·54	United Provinces	..	23·37
Burma	..	20·81	Central Provinces	..	30·53

The death-rates for rural and urban areas in the Presidency as a whole were 24·87 and 30·11 respectively against 22·49 and 28·26 in 1922. Excluding Bombay City and Sind, the rate for the Presidency was 28·16 against 25·42 in 1922.

Of the districts the highest death-rates were returned by Sholapur (36·58), Dharwar (35·95), Broach (32·72) and Satara (31·30) and the lowest by Bombay Suburban (17·99) and Panch Mahals (20·93).

15. Of 190 Talukas, Pethas and Mahals, only 3 show death-rates exceeding 40 per mille of their population, Hubli (53·95), Kalghatgi (50·87) and Barsi (51·94) being the highest. Ambernath in Bombay Suburban district is in this category. Fifty recorded rates above 30. Amongst the lowest rates are Nawapur 16·60, Poona City taluka 18·36, Nargund 15·13 and Jhalod 15·49.

16. For urban areas death-rates varied between 56·72 for Pandharpur town and 10·19 for Manmad. Out of 86 urban registration circles,

7 returned death-rates over 40, *viz.*, Pandharpur (56·72), Satara (55·31), Hubli (49·59), Dharangaon (47·49), Barsi (46·29), Malegaon (43·31) and Borsad (41·69).

17. *Corrected Death-rates.*—The following table gives the death-rates corrected in accordance with age and sex distribution for the Presidency and for the six towns for which such correction is possible :—

—	Standard death-rate.	Factor for correction.	Recorded death-rate.	Corrected death-rate.
Presidency (excluding Bombay City and Sind)	39·8	1	28·16	28·16
Bombay City	28·6	1·39	32·74	45·51
Poona	37·0	1·08	38·51	41·59
Ahmedabad	37·6	1·06	37·31	39·55
Sholapur	39·4	1·01	37·43	38·80
Karachi	38·5	1·03	31·94	32·90
Surat	39·0	1·02	31·02	31·64

18. *Bombay City.*—Population 1,148,815. The registered deaths amounted to 37,614 as against 36,925 in 1922. The number of infantile deaths was 8,553 or a ratio of 413·91 per 1,000 births, as against a rate of 405·16 in 1922. The chief causes of death shewn in the returns are Plague, Fevers, Dysentery and Diarrhœa and Respiratory diseases.

19. *Ahmedabad City.*—Population 270,899. The registered deaths amounted to 10,097 against 9,134 in 1922. The number of infantile deaths was 3,291 equal to a ratio of 297·61 per 1,000 births. The total number of births registered was 11,058, equal to a birth-rate of 40·86 compared with 36·02 in 1922. The chief causes of death shewn in the returns are Fever and Respiratory Diseases and the increase is largely attributable to epidemics of Measles and to the increase in the infant population.

20. *Poona City.*—Population 133,122. The total deaths registered amounted to 5,126 against 5,703 in 1922. The number of registered births was 2,179 equal to a birth-rate of 16·37. The chief causes of deaths shown in the returns were Plague, Fevers and Respiratory diseases. The infantile death-rate per 1,000 births amounted to 592·01.

21. *Karachi City.*—Population 199,014. The total deaths recorded were 6,356 as compared with 6,430 in 1922. The chief causes of death shown in the returns were the same as in Poona City. During the year under review 8,656 births were registered equal to a birth-rate of 43·49 as compared with a birth-rate of 35·03 in 1922. Infantile deaths numbered 1,891 corresponding to a ratio of 218·46 per 1,000 registered births as compared with 1,757 or a ratio of 252·01 in 1922.

22. *Surat City.*—Population 117,428. The total deaths recorded were 3,643 against 3,746 in the preceding year. The chief causes of death shown in the returns were Fevers and Respiratory diseases. 2,973 births were registered equal to a birth-rate of 25·32 as compared with

26·62 in 1922. The infantile deaths numbered 1,147, corresponding to a ratio of 385·81 per 1,000 registered births, as compared with 1,252 and 400·51 respectively in 1922.

23. *Sholapur City.*—Population 119,347. The year was a distinctly unhealthy one for this city, the total deaths recorded being 4,467 as against 3,727 in the year preceding. Fever is the chief cause of death in the returns. Three epidemics (Plague, Cholera and Measles) visited the city. While the birth-rate fell to 33·70 per mille (4,022 births being registered as compared with 4,344 in 1922), the infant mortality rate per 1,000 births increased to 233·21 as compared with 232·97 in 1922.

24. *Death-rate in Sind.*—The death-rate for Sind was 13·33 as compared with 12·42 in 1922 and 25·70 the average of the previous 10 years. The increase over last year's figures appears under "malaria" and pneumonia. The rise in births (shewn above) would itself raise the death-rate by adding to the element of the population most liable to die. The urban (26·61) greatly exceeds the rural death-rate (10·83) as in previous years. This is attributable to faulty registration in rural areas as has been commented on in the case of births.

25. *Death-rate in Cantonments.*—The lowest death-rate recorded was ·85 in Santa Cruz, while Kirkee headed the list with a rate of 21·65. Respiratory diseases in the latter Cantonment were responsible for 87 deaths, equal to a ratio of 10·89 per mille of population.

26. *Births* versus *Deaths.*—Over the Presidency as a whole, births exceeded deaths by 185,666 yielding a "natural increase" of 0·97 per cent. on the population compared with 0·88 per cent. for the year previous. In the Presidency alone excluding Bombay City, the percentage of increase amounts to 1·13. For Sind the figure is 0·90. In Bombay City on the other hand, deaths exceeded births by 16,950 or 1·47 per cent. of the City's population. Further details are given in columns 6 and 9 of Annual Form No. II.

27. *Mortality according to Sex.*—108·5 deaths of males were recorded for every 100 female deaths (compared with 111 per hundred in 1922). For Sind the proportion is 124 per 100. The actual totals are: males 258,244; females 238,000. The excess in male deaths is primarily and mainly a matter of population, *i.e.*, there are more lives at stake, but over and above that, more males normally die than females for the same population despite the higher death-rate amongst females at the child-bearing age. For the year under report, however, taking the sex populations separately, we find that the death-rate amongst females (26·11 per 1,000 of the sex living) is higher than amongst males (25·70). This phenomenon in the Vital Statistics of the Presidency has only appeared once previously, *viz.*, in the influenza year 1918. Its recurrence is not explained by the degree of incidence of influenza as reported during the year; but possibly it portends a recurrence of that disease. The increase in the female as compared with the male death-rate for the year is especially marked in the age-periods 15 to 40 thus coinciding with the ages when influenza is most incident and it is shown elsewhere in the report that there

is no increase in mortality due to child-birth that would account for the phenomenon.

Infant Mortality.

28. There were 108,912 deaths among infants under twelve months corresponding to a ratio of 159·76 per 1,000 registered births against 169·10 in 1922. The male and female rates were 166·89 and 151·93, respectively, as compared with 176·53 and 161·01 in the previous year.

Infant mortality 1923, compared with previous years.

Year.	Deaths under 12 months.			Births registered.			Infant death-ratio per 1,000 births.			Infant deaths per 100 of total deaths.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
1923 ..	59,228	49,684	108,912	354,890	327,020	681,910	166·89	151·93	159·76	21·95
1922 ..	57,130	47,841	104,971	323,631	297,139	620,770	176·53	161·01	169·10	23·19
1921 ..	60,231	51,023	111,254	325,751	298,889	624,640	184·90	170·71	178·11	22·32
1920 ..	59,236	49,440	108'676	309,463	283,712	593,175	191·42	174·26	183·21	19·36
1919 ..	58,950	51,398	110,348	285,195	261,265	546,460	206·70	196·73	201·93	17·32
1918 ..	94,553	83,124	177,677	322,546	296,678	619,224	293·14	280·17	286·93	10·32
Average for 1913-1917	73,676	63,999	137,675	368,134	341,696	709,831	200·24	189·45	194·09	19·41

Of the infants who died, 45,313 were in their first month of life (—26,323 of those were under one week—) ; 35,217 were over one month but not exceeding six months and the remainder—28,382—were between six months and twelve. The percentage of the total infant mortality under each of these three sub-groups works out to 41·6, 32·3 and 26·1 respectively. The details of the average hundred infant deaths in each Registration District will be seen in the following table :—

Districts.	Infantile deaths.		Not exceeding one month.	1—6 months.	6—12 months.
	In every 100 total deaths.	Per 1,000 births.			
Western Registration District.	24·58	149·15	·43·6	34·6	21·8
Central Registration District.	19·94	143·49	41·4	33·6	25·0
Southern Registration District.	18·08	142·37	46·7	30·7	22·6
Guzerat Registration District.	24·36	181·08	35·3	33·6	31·1
Sind Registration District ..	25·31	150·93	43·5	28·3	28·2
Bombay City	22·74	413·91	38·3	27·2	34·5
Presidency	21·95	159·76	41·6	32·3	26·1

Throughout the Presidency, mortality amongst infants is greatest in the first month of life.

29. The following is a brief extract from the section that deals with infant mortality in the annual report of the Executive Health Officer, Bombay Municipality :—

"*Bombay City.*—The number of deaths among infants under one year of age was 8,632 being 396 more than in 1922 but 3,017 less than the quinquennial average and 1,068 less than the average of 1913-1922.

The percentage of infant mortality to the total mortality at all ages was 22·74 against 22·08 in 1922 and 23·78 in 1921. The ratio per 1,000 of live births registered was 411 against 403 in the antecedent year and 475 the decennial average.

The infant population, or the number of infant lives at risk during the year is usually accepted as being represented with sufficient accuracy by the number of births registered during the year under consideration. In Bombay however it is estimated from inquiries made during the year that out of the total number of infants in the City, 31 per cent. do not appear on the Municipal Register of Births because they have been born elsewhere, whilst 8 per cent. do not appear although born in the City because the parents do not register them.

The additions to be made to the registered births on these two counts in estimating the total number of infants lives at risk are therefore, as follows :—

	Number.	Per cent.
Registered Births	20,995	61
Infants born in the City and not registered	1,680	8
Outborn Infants	9,432	31
Total infant lives at risk ..	32,107	100

Cast on an infant population of 32,107 the death-rate among infants would be 269 as compared with the officially recorded rate of 411.

The only fallacy involved in this calculation arises from the fact that no infant is likely to be brought into the City much before the age of 1 month, while some may not be brought till they have attained the age of 10 or 11 months. Thus the lives of none of those 9,000 infants are at risk for more than 11 months, whilst the lives of some may be at risk for only a few days between the date of their arrival in the City and the date on which they attain the age of 1 year.*

Cause of Death.—It will be seen that 6,155 or nearly 71 per cent. of the total deaths in infants were due to diseases of the Respiratory System, Infantile Debility and Premature Birth as in 1922 (5,835 deaths). Dirrahœa and Enteritis caused 662 deaths, Malaria, Ague and Remittent Fevers 89 deaths and Convulsions 1,106 deaths. The deaths from small-pox and Measles number 87 and 27 respectively.

There are other objections to this method of calculation.

* The fallacy embraces several factors that discount the value of this method.—Dir., Pub. Health.

Quinquennial Averages.—Compared with the averages of the preceding five years, Small-pox shews a decrease of 20, Measles of 81, the group Ague, Remittent Fever and Fever not defined of 166, Dysentery of 14, Diseases of the Respiratory System of 1,621 and Infantile Debility and Premature Birth of 2; on the other hand Malaria shews an increase of 1 and Diarrhœa and Enteritis of 2 deaths.

Of the total deaths among infants 1,830 or 21·20 per cent. took place in the first week of life and 1,478 or 17·12 per cent. in the age period 1 to 4 weeks.

The mortality among infants who had not completed the first month of life was thus 3,308 or 38 per cent. of the total infant deaths. The number of deaths in the age groups 1 to 6 months and 6 to 12 months was 2,350 and 2,974 being respectively 27 and 34 per cent. of the total infant mortality.

The salient features in the year's statistics are the magnitude of the rôle played by debility and prematurity in the causation of deaths in the first four weeks of life and the large proportion of deaths from Respiratory diseases during the remaining 11 months of infancy.

The analysis of deaths from different causes in 1901—1921 shows that an excessive death-rate among infants does not occur except in conjunction with an excessive death-rate at all ages and that the fluctuations in infant mortality which corresponded in time and direction with those of the general death-rate were indirectly or directly due to Plague in the first decade of the century and to Influenza in 1918—1921. In 1922 the total deaths at all ages and the deaths amongst infants under 1 year of age were respectively 30 an 35 per cent. less than in 1921; while in 1923 there was a rise of 2 per cent. or of 662 deaths under the former group and of 5 per cent. or of 396 deaths under the latter. The number of Plague deaths in 1923 was 1,329 as against 632 in the antecedent year.

From table illustrating the infantile death-rate in the different sections of the city and according to caste and number of rooms occupied the following items are extracted :—

Infant mortality among the principal castes are Hindus of other castes 310, Hindu low caste 461, Brahmins 599, Banias 318, Mussalmans 432, Indian Christians 487, Jews 172, Parsees 168 and Europeans 193 per 1,000 births registered."

" Infant mortality by the number of rooms occupied in 1923 :—

—	Births.		Deaths in infants.		Infant mortality per 1,000 births registered.	
	No.	Percentage.	No.	Percentage.	1923.	1922.
1 Room and under ..	14,302	68·12	7,500	86·89	524·4	470·9
2 Rooms	1,024	4·88	404	4·68	394·5	435·7
3 Rooms	368	1·75	94	1·09	255·4	421·6
4 or more rooms	146	0·69	36	0·42	246·5	300·3
Roadside	20	0·10	17	0·20	850·0	386·3
Hospitals	5,135	24·46	581	6·72	112·2	150·5
Total ..	20,995	100·00	8,632	100·00	411·1	402·7

The percentage of population occupying tenements of 1 room and under to the total number of occupants in all classes of tenements in the City by the Census of 1921 was 65·88. Of the 20,995 births registered in the year 14,302 or 68·12 per cent. occurred in families living alone in a single room or sharing it with others, and the number of deaths in infants in this class of population was 7,500 or 86·89 per cent. of the total infant mortality. It will be observed from the statement that the rate of deaths among infants in single room tenements per 1,000 births in such tenements during the year was 524 against 471 in 1922 and that the proportion of deaths to births varies inversely as the number of rooms occupied by the parents.

Prevention of Infant Mortality.—The work which is being done in Bombay for the reduction of infant mortality and the detailed summary is on the lines fully described in the report for the year 1920.

During the year the Municipal Nurses paid 54,402 visits to houses, chawls and huts, inquired into 5,474 cases of ordinary sickness and reported 433 cases of infectious diseases and 1,144 deaths in the female population of the City. They also attended 1,914 confinements and verified the reports of the Birth Karkuns on 7,016 births.

Of the total number of 22,937 births (including 1,942 still-births) registered in the City during the year 14,517 or 63 per cent. were verified by the Municipal Nurses against 60 per cent. in 1922 and 60 per cent. in 1921.

Among the cases wherein inquiries were made the proportion of births wholly unattended was 5·7 per cent. and that of confinements attended by unskilled women 52 as against 6·1 and 60 respectively in 1922.

"The percentage of confinements attended by qualified midwives was 8 and that of confinements attended by Municipal Midwives was 13·3; the percentage of children born in Hospitals (21·5) shewed an increase of 3·6.

The percentage of children born in healthy condition was 64 as against 72 in the previous year and that of children fed on breast was 64 as against 62 in 1922.

The percentage of children dying within 30 days of birth was 14 against 12 per cent. in 1922.

The percentage of mothers who left home for work leaving their children to the care of others shows a decrease of 4·7.

The total number of women admitted in all the three Municipal Maternity Homes during the year was 1,773 against 1,784 in 1922. The number of cases confined in the three Homes was 1,592 against 1,627 in 1922.

Infant Milk Depots.—The two Milk Depots supplied 30,216 seers of Milk free or at a nominal price to children born in the Homes or under the supervision of the Municipal Nurses.

Voluntary Welfare Centres.—The Maternity and Child Welfare Scheme of the Infant Welfare Society has made much progress. At the end of the year the Centres established numbered 9. The Society provides through them (1) advice and instruction to mothers as to infant management, (2) medical aid to infants and (3) a staff of trained nurses for visiting the homes of infants. A Creche is attached to the Tardeo Centre and now contains 30 children."

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30. *Deaths by castes or classes.*—Deaths by classes and by sex are recorded in Annual Form No. V, Appendix IV.

31. *Deaths according to causes.*—The following table shews the number of deaths in 1923 and the ratio per 1,000 of population arranged according to causes and contrasted with the figures for 1922 and with the mean for the preceding ten years :—

	1923.		1922.		Mean for ten years.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Cholera	9,221	·48	2,768	·14	12,886	·66
Small-pox	2,811	·15	1,170	·06	4,262	·22
Plague	33,741	1·76	8,379	·44	44,757	2·29
Fever	196,231	10·24	197,888	10·33	354,045	18·12
Dysentery and Diarrhœa ..	22,238	1·16	21,118	1·10	32,738	1·68
Respiratory Diseases ..	84,334	4·40	82,682	4·31	85,009	4·36
Injuries	7,514	·39	7,810	·41	7,832	·41
Other causes	140,154	7·31	130,766	6·82	152,043	7·79
All Causes ..	496,244	25·89	452,581	23·61	716,634	36·64

There is an increase in mortality especially under the headings cholera, small-pox and plague as compared with last year.

32. Contrast graphs of the monthly incidence of deaths under the chief epidemic and general causes for the year under report compared with 1922 and the mean of 1911-20 are shown in two Charts (opposite pages 14 & 25).

33. For comments on the Causes of deaths, *vide* Section VI.

34. *Cantonments in Native States.*—The total number of births in cantonments situated in Native States during the year 1923 was 2,266 against 2,008 in 1922 giving a birth-rate of 20·34 per 1,000 of the population against 18·03 for the previous year. There were 2,271 deaths equal to a ratio of 20·38 per mille against 2,657 and a ratio of 23·85. The statistics are tabulated below :—

Statement showing the names of Cantonments with population and deaths from diseases for the year 1923.

Cantonments.	Population according to Census of 1921.	Area in square miles.	Average population per square mile.	Number of births.	Ratio of births per 1,000 of population.	Number of deaths from					
						Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.
Aden Municipal limits ..	44,000	70	629	874	19·86	..	9	..	256	242	153
Purely Civil population of Cantonment ..	650	7·44	87·37	11	16·92	..	..	..	8	..	..
Baroda ..	2,934	1·09	2,934	41	13·97	..	2	..	29	..	..
Deesa ..	5,449	3	1,816	117	21·47	..	4	..	64	1	..
Mhow ..	31,734	6·5	4,882	373	11·75	..	24	..	168	1	..
Nasirabad ..	15,959	8	1,994·7	567	35·53	..	5	..	200	28	41
Neemuch ..	10,490	4·52	2,539	274	26·12	..	21	..	147	..	3
Rajkot ..	175	·50	350	9	51·43	..	..	..	4	..	..
Total ..	111,391	101·05	1,003·3	2,266	20·34	..	65	..	876	272	197

Cantonments.	Number of deaths from—contd.			Ratio of deaths per 1,000 of population.								
	Injuries.	Other Causes.	All Causes.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	Other Causes.	All Causes.
Aden Municipal limits ..	14	350	1,024	..	·20	..	5·82	5·50	3·48	·32	7·95	23·27
Purely Civil population of Cantonment ..	2	4	14	..	..	..	12·31	..	..	3·08	6·15	21·54
Baroda ..	..	20	51	..	·68	..	9·88	..	..	..	6·82	17·38
Deesa ..	1	14	84	..	·73	..	11·74	·19	..	·19	2·57	15·42
Mhow ..	..	249	442	..	·75	..	5·29	·03	..	..	7·85	13·92
Nasirabad ..	1	123	398	..	·31	..	12·53	1·75	2·57	·06	7·71	24·94
Neemuch ..	..	82	253	..	2·00	..	14·01	..	·29	..	7·82	24·12
Rajkot ..	..	1	5	..	..	..	22·86	..	..	..	5·71	28·57
Total ..	18	843	2,271	..	·58	..	7·86	2·44	1·77	·16	7·57	20·38

35. *Rainfall.*—The dominant features of the monsoon were its lateness in arrival and its failure to extend into the interior of the Presidency either north or east. When it did start, over a week late, the current was vigorous and caused fairly widespread precipitation throughout the Konkan and most of the Deccan. By the middle of June this promise of good general rain disappeared and with the exception of slight rainfall in the South Konkan there was practically nothing further till July when the same areas received a further beneficial supply reaching as far north as Surat. The rainfall in Broach and Kaira was below normal while further north and in Kathiawar it remained insufficient.

August.—Kanara alone received excess, sufficient to cause damage by floods. In Guzerat except Surat, the amount approached average but in the Deccan and Karnatic and still more so in Kathiawar rainfall was deficient.

September.—In the 3rd week of the month a fall that was almost general brought about some improvement but the rainy season closed leaving Guzerat badly in defect, North Guzerat more so and Kathiawar in severe shortage—rainless in some areas.

36. Prices of food grains were generally lower than those of last year. In East Khandesh and Panch Mahals districts and in the whole of Sind the rates of staple food grains were on the average much more favourable to the consumer than in the previous year, the fall in price amounts to over 30 per cent. In Belgaum, Dharwar, and Bijapur there was a slight rise in rates. In the districts of Thana, Kolaba and Ratnagiri there was a drop of 10 per cent. in the price of rice while in Kanara and in Bombay there was practically no change.

SECTION VI.

HISTORY OF CHIEF DISEASES.

General Remarks.

37. Following on 1922, the record year of low death-rate, the year under report shows in comparison a high mortality. The increase over 1922, however, is mainly the result of epidemics. A succession of Plague, Cholera, Measles, and Small-pox carried off over half a lac of people or three and a half times the number in 1922. More than half of the increase is allocated amongst three Collectorates, Satara, Dharwar and Sholapur, each of which suffered severely from such epidemics. The epidemic of Small-box was only in its commencement and its full effect remains to be shown in the year to follow. For Influenza, alone of epidemic diseases, a lower figure of deaths was recorded but there is reason to believe that it was more prevalent than in 1922 in a milder form generally but with virulence reminiscent of the pandemic of 1918 in two or three—fortunately very localized areas. That Influenza persists is shown by the curves (Chart IV) of deaths from respiratory diseases which is the only general disease heading that continues to compare unfavourably with its pre-pandemic average. The continuance of Relapsing Fever—an epidemic disease productive of illness rather than of death—is another adverse feature of the year's medical history.

Mortality from diseases other than epidemic is no worse than the average of the past two or three years. The most noticeable increase is under the heading " Other Causes " which includes most of the ill-defined diseases under which infant deaths are recorded. The great increase in birth in itself would account for such increase in mortality as there is, for increase in births means increase in the section of the population most liable to die.

38. The following paragraphs deal with the deaths under the different headings and further comparison is shown in the table in paragraph 31 and in graphic form in the three Charts inserted in this Report.

Fevers.

39. 196,231 deaths (102,206 males and 94,025 females) were recorded as due to fevers against 197,888 in 1922 and a decennial mean of 354,045 (250,715 excluding 1918 the influenza year). The death-rate was 10·24 against 10·33 in 1922 and a quinquennial mean of 23·06.

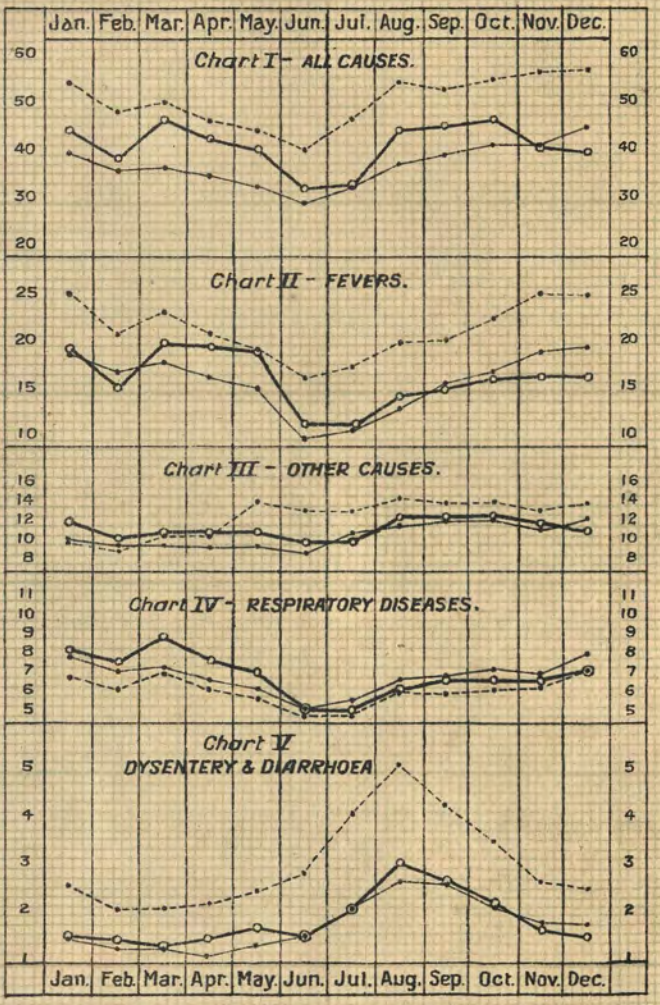
The annual mortality attributed to fevers in previous years is given in the following table :—

Year.	Number of deaths.	Rate per mille.
1901 to 1910 mean	*258,497*	*14·00*
1911 to 1915 mean	*247,926*	*12·66*
1916	262,401	13·40
1917	298,919	15·26
1918	1,284,013	65·55
1919	274,759	14·03
1920	266,092	13·58
1921	226,100	11·80
1922	197,888	10·33
1923	196,231	10·24

MONTHLY INCIDENCE OF DEATHS FROM CHIEF CAUSES.

1923.o—o, 1922.•——•, Previous Average*.•- - -•.

Scale figures represent deaths in thousands.


Jan. Feb. Mar. Apr. May. Jun. Jul. Aug. Sep. Oct. Nov. Dec.
Chart I – ALL CAUSES.
60 50 40 30 20
Chart II – FEVERS.
25 20 15 10
Chart III – OTHER CAUSES.
16 14 12 10 8
Chart IV – RESPIRATORY DISEASES.
11 10 9 8 7 6 5
Chart V
DYSENTERY & DIARRHOEA
5 4 3 2 1

*1918 (Influenza year) Omitted in the average of Charts I. II & IV.

40. The distribution of fever deaths is shown in Annual Form No. IX. Thana (16·83) and Kolaba (15·43) are again the Collectorates showing the highest death-rates, though the figure for the latter is an improvement on 1922. The other districts that recorded high rates are Broach (14·90), Sholapur (14·17), Sukkur (13·78) and Ahmedabad (13·30).

The urban fever death-rate was 6·78 and the rural 11·08 against 6·48 and 11·25 respectively in 1922. The highest urban death-rates in the Presidency proper were recorded in Barsi (27,00), Pandharpur (22·45), Ankleshwar (21·44), Nadiad (19·08) and Yeola (18·82), and in Sind, Garhi-Yasin (21·03), Ratodero (19·40), Mirpurkhas (17·86), Nawabshah (17·68) and Rohri (17·40).

The details of sub-headings of deaths from fevers are as follows:—

41. *Malaria.*—34,957 deaths were recorded against 33,674 in 1922 equal to a death-rate of 1·82 against 1·76. The figures are, for the Western Registration District 185, Central 6,306; Southern 7,028; Guzerat 502 and Sind 20,569; as compared with 131; 7,885; 5,984; 407 and 18,818. 367 deaths were registered in Bombay City against 449 in 1922.

The Assistant Director of Public Health, Guzerat Registration District, reports:—

"Malaria is certainly responsible for a greater number of deaths than is shown by the figures of this District. All these are conveniently entered under the head 'Fevers'. The rise under that (major) head, therefore, should be taken to some extent as due to malaria. I had opportunity of confirming this, while touring, this year, in Surat District, which is considered most malarious in Guzerat."

Excluding Sind, the malaria death-rate was 0·90 compared with 0·91 in the previous year. The urban and rural death-rates were 0·86 and 2·05 respectively against 0·83 and 1·98 in 1922.

The highest rural death-rates from malaria were recorded in Sind as the following list by districts shows:- Sukkur (10·57), Thar and Parkar (7·89), Jacobabad (7·49), Larkana (6·75), Karachi (6·23), Nawabshah (6·16) and Hyderabad (3·84) and in the Presidency proper, Kanara (4·51), Poona (4·00) and Ahmednagar (3·25).

42. *Anti-malarial Measures.*—There is but little to record in the way of efforts to combat the malaria scourge as the following extracts from District Officers' reports show:—

The Civil Surgeon Sukkur, reports:—"On account of great financial stringency prevailing, no Touring Medical Officers were appointed on malarial duty. Even the free distribution of the quinine tabloids was also stopped during the year."

No special grant was placed by Government at the disposal of the Director of Public Health for free distribution of quinine during the year under report. Some district officers nevertheless applied for supplies of the drug to this office direct or through other officers, only, of necessity to be refused. It seems vain to expect that local bodies will produce funds for their several areas for such necessary public health purposes. The Collector of Surat considers malaria the most important problem in a

large part of his district. He advocates " a system of propaganda through every available agency including private persons of influence " and adds : " I feel convinced that in most parts of this district the problem of prevention of excessive malaria could easily be tackled. If quinine were placed freely at the disposal of the people, with intelligible instructions and assistance in administering it properly, I am sure they would readily make use of it." This is in the right direction though the money especially the large sums for anti-malarial works and the private persons of influence (in the absence of enthusiastic officials) have yet to materialise.

On the other hand the Civil Surgeon, Larkana, expresses satisfaction with the efforts made in his area and reports : " This year the malaria season was severe owing to huge inundation and heavy rainfall during the season, *viz.*, July and August 1923. The epidemic would have proved more severe, but the timely care and precautions nipped it in the bud."

Only 1,367 lbs. of quinine against 1,687 lbs. in 1922 were sold or distributed free throughout the Presidency, by District Local Boards, Municipalities and Post Offices.

Details of expenditure on anti-malarial measures for all the Districts in Northern Division (except Thana) and for Nasik and East Khandesh in Central Division have not been received.

During the year, Rs. 1,74,452 were spent on anti-malarial measures against Rs. 1,25,311 (for the whole Presidency) in 1922. Of this sum, Rs. 2,167 were from Provincial, 1,68,889 from municipal and 3,426 from District Local Boards.

The chief item in Provincial expenditure was Rs. 1,790 spent by the Bombay Municipality. Including this the expenditure of the municipality amounted to Rs. 71,958. Of this sum, Rs. 59,210 were establishment charges ; Rs. 4,040 contingencies ; Rs. 1,276 were spent on disinfectants ; Rs. 4,200 on filling in wells or covering them with concrete covers and other measures required for dealing with tanks, wells, etc., for the prevention of malaria ; and Rs. 3,231 on providing new pattern iron storm water gratings.

For filling up mosquito breeding grounds and borrow pits, Karachi municipality spent Rs. 83,095 and Hyderabad Rs. 1,486 ; for all the remaining municipalities the aggregate sum so expended amounted to Rs. 5,739 only. Karachi municipality spent a further sum of Rs. 2,870 and the municipalities in Bombay Suburban District Rs. 632 of the total of Rs. 4,356 spent by all mofussil municipalities for the treatment of mosquito breeding grounds with larvicides.

Municipalities also spent Rs. 2,263 for free distribution of quinine and Rs. 705 on quininization of schools, the largest amounts being Rs. 655 and Rs. 469 by the municipalities in Larkana and Nawabshah Districts.

District Local Boards incurred a total expenditure of Rs. 3,426 on anti-malarial measures ; of this Rs. 3,174 were spent on free quinine. Quinine tablets worth about Rs. 323, remaining over from the previous year's stock

were distributed to school children and the public generally in the Province of Sind.

The District Local Board, Thar and Parkar, spent Rs. 195 on quininization of schools.

43. *Enteric Fever.*—2,272 of the "Fever" deaths were registered as due to Enteric. The accuracy of death figures allocated to this sub-head in rural areas is not to be relied on. For urban areas the highest Enteric death-rates were recorded in Ilkal 2·28, Ranebennur 1·15, Gokak 1·00, Wai 0·78 and Poona City 0·71. Bombay City returned 130 deaths against 109 in the preceding year. Karachi City showed 44 deaths and Hyderabad 22.

44. *Measles.*—6,504 deaths were registered against 2,134 in 1922. The epidemic was most virulent in Guzerat where it caused 2,688 deaths. In the Southern and Central Registration Districts, it was also acute—1411 and 1206 deaths. The totals for Western R.D. and Sind were 655 and 402 respectively. Bombay City recorded 142 deaths from Measles against 22 in 1922.

The death-rate was 0·34. The urban and rural death-rates were 0·82 and 0·22 respectively, for the Presidency as a whole. The highest rates for urban areas were recorded in Nadiad (5·42), Mehmedabad (4·97), Ahmedabad (4·63), Bagalkot (3·60), Kapadvanj (3·58), Ranebennur (3·44), Guledgud (2·51), Shikarpur (2·46) and Surat (2·40).

The Assistant Director of Public Health, Guzerat, reports:—

"The deaths recorded from measles amount to nearly 25 per cent. of the rise in total mortality for the year and the epidemic probably was prevalent to a greater extent than is shown. Congestion, the chief factor in spreading infection, is the main explanation of the greater prevalence in Town than in rural circles. Ahmedabad, Surat and Nadiad which are most congested suffered most. Preventive measures, such as were possible, were taken. Municipalities and Sanitary Associations were addressed. A note on Measles on the lines as for other epidemic diseases sent to the President, Nadiad Municipality, was distributed to every house in the town."

45. *Relapsing Fever.*—An epidemic of this disease affecting chiefly the Bhangis, appeared in Godhra town in December 1922 and the municipality suspecting malaria arranged for free distribution of quinine. By February 1923 there was no improvement and a Medical Officer was engaged to attend the sick. He continued to treat the cases as malaria. On 7th March the Civil Surgeon personally visited the affected Bhangi settlement and after microscopic examination of blood smears declared the disease to be Relapsing Fever.

No notification of the existence of the disease was sent to this Department. The Assistant Director of Public Health, Dr. J. L. Pinto, D. P. H., happened to visit Godhra in March in the course of his tour and carried out a thorough investigation of the epidemic and a full report was subsequently submitted to Government under this office Nos.

E.P.D.P.—3977 and 152 of 28th August 1923 and 11th January 1924 respectively.

The Bhangi population of Godhra is 638 and out of that number there were 300 attacks and 33 deaths. The A. D. Public Health found them highly infested with lice, their water supply was inadequate—water for bathing in particular—and these facts explain the special prevalence amongst the community. A neighbouring settlement of Dheds or Dublas had no cases. They had a good well to which Bhangis are denied access and their persons, clothing, etc., were found cleanly.

Full instructions were given by the Assistant Director to the Municipal Secretary of Godhra as to the action to be taken. The Municipality had no qualified Sanitary Inspector in charge of their sanitation and they appear to have been in hurry to slack off measures too early. The epidemic subsided in June but only for a short while.

The following history is given by Dr. Pinto :—

"Infection in the first instance seems to have been brought to Shivrajpur Mines by coolies from Raichur. Subsequent to the Godhra town outbreak a careful study of the vital statistics of Panch Mahals made me suspect the existence elsewhere in Godhra, Kalol and Halol talukas. Revenue Officers were asked to enquire about any abnormal sickness in their areas and it was gathered that considerable amount of an abnormal sickness did prevail. Exact figures in places other than Godhra town are not available. In three of the villages namely Vejalpur, Kalol and Derol, investigated by the Medical Officer placed on special duty only 39 cases of the 'strange disease' were traceable but there were 20 deaths—a case mortality very high and quite unlike relapsing fever. Incidence, therefore, was much higher than was reported. Altogether some 20 villages are known to have been affected and the total deaths recorded from the disease in the area of Kalol and Halol talukas and Godhra T. C. from the beginning of the year up to July when it was declared free was 77 including deaths in Godhra T. C. The sweeper caste as in the case of Godhra suffered most but the epidemic was not confined to them.

During the first outbreak a S. M. S. Officer from Godhra Hospital was placed on epidemic duty from 21st May 1923 and supplied by the Civil Surgeon with drugs (Salversan, parasiticides, etc.) and a microscope to examine the blood of as many cases as possible under the microscope. He visited 33 towns and villages and treated 31 cases with Salversan injections. He distributed vimigilli free in affected quarters and directed wholesale disinfection in affected areas.

The usual features of the disease were noted, *viz.*, Jaundice, bleeding from the nose, high fever (in some cases delirium) with cough or gastro-intestinal or nervous symptoms and the characteristic relapses one, two or three occurred in a very large number of cases. Blood smears of some 148 patients were examined and the

micro-organism (spirillum) of the disease was found in 72 of them.

Second outbreak.—An epidemic in Vejalpur village of Kalol taluka was reported by the Mamlatdar; the Assistant Director in the company of the Civil Surgeon visited the village. It was decided to despatch immediate medical aid and a S. M. S. officer deputed from the Civil Hospital took over charge on 16th August and commenced investigating all cases suffering from fever, taking blood films of cases suspected and giving salvarsan injections to those whose blood test showed positive result. He visited 24 villages of Kalol taluka during the period from 16th August to 5th November 1923 and examined 151 persons. During this outbreak 201 cases were recorded of which 10 proved fatal."

Relapsing fever also appeared in epidemic form in the Southern Registration District. It was prevalent in the Criminal Tribes Settlement at Hubli from 3rd September 1922 to 28th February 1923 causing 63 attacks and 3 deaths. In the settlement at Gadag there were from 3rd May to 15th June 1923, 27 cases and from mid December to mid January (1924) a further batch of 20 cases—all non-fatal. The patients were treated with neo-salvarsan injections. Cases (one fatal) occurred amongst the town population at Hubli as well. In Belgaum district the disease was detected by a Lady Doctor of the Mission House, Daddi, who states "the disease was introduced in the month of June into Kot village (Taluka Hukeri) by Berads from a village in Sangli State. She personally attended and treated 71 cases of which 7 proved fatal." The diagnosis was confirmed by the Civil Surgeon, Belgaum, who examined the blood films and found Typical Spirillæ.

Though not to be classed amongst the very fatal epidemic diseases relapsing fever can cause widespread illness and economic trouble amongst communities of workers. I would endorse the closing remarks of Dr. J. L. Pinto's report:—

"I am strongly of opinion that relapsing fever is not only endemic in this Presidency of Bombay, but it is widely spread. The detection of epidemic of Panch Mahals was accidental. A thorough investigation and full inquiries on prevalence of relapsing fever in this Presidency by an expert officer such as has been recently carried out in the United Provinces by the late Colonel Cragg, I.M.S., is much desired and would throw considerable light on the existing conditions. It would not be surprising to find a recurrence since it is known that epidemics of relapsing fever are of long duration, lasting a period of about 2 or 3 years.

There are scanty records of epidemic of relapsing fever (also called 'Famine Fever') in this Presidency. In the Arthur Road Hospital, Bombay, cases used to be noticed from 1897 to 1909 when they suddenly ceased. They again re-appeared in 1919 and some 458 admissions were recorded. From 1917 to 1920 the disease was prevailing in fairly severe epidemic form in United Provinces. In 1920 deaths

due to relapsing fever were registered from Ahmednagar district, Nasik, Kirkee, etc. In September 1922, I actually saw a few cases of relapsing fever in Poona. I am, therefore, inclined to believe the disease is also endemic in the Bombay Presidency. It probably passes unnoticed, being taken for malaria or a mere 'Bokhar'. Even to medical men diagnosis of the disease without the aid of microscope is uncertain.

My thanks are due to Major Ives, I.M.S., Civil Surgeon, Godhra, for his valuable co-operation and help received."

46. *Kala Azar.*—Only one death was reported from Bombay City.

Influenza.

47. Influenza as a factor in causing death has steadily diminished since the pandemic year as the following figures shew :-

Year.	Number of deaths.	
1918	10,41,481	(estimated)
1919	39,786	„
1920	16,690	(registered)
1921	3,679	„
1922	1,222	„
1923	991	„

48. The disease was present throughout the year and in all parts of the Presidency, for the most part in mild form but with localized epidemic exacerbation in certain areas. Thus while Bombay City returned less than half the death figure of the preceding year, Thana District just outside suffered two sharp epidemics resulting in 1,143 (reported) attacks and 329 deaths during January to April and August and September. The rest of the Western Registration District reported but 5 deaths amongst a few cases confined to Nasik and the Khandesh collectorates.

49. Again in the Central Registration District (131 deaths) an epidemic intensity reminiscent of the pandemic year was exhibited in one taluka Satara, four villages of which reported 104 deaths in 195 cases. The town of Satara itself had but one death ; Mahableshwar returned 12 and the figure for the whole collectorate was 117. Excess fatality amongst females (100 compared with males 92·7) was a feature as during the pandemic of 1918. Sholapur, Poona and Ahmednagar collectorates together recorded only 5 deaths as compared with 180 in 1922.

50. In the Southern Registration District Dharwar collectorate suffered a relatively severe epidemic affecting 23 of its villages and causing 150 deaths of which the larger towns recorded but a few, *e.g.*, Dharwar 6, Gadag 9, Hubli 2. Bijapur and Belgaum districts registered 42 and 16 deaths from the 11 and 8 centres (respectively) infected while in Kanara there were only 6 deaths in all.

51. In Sind the infection was localized to 2 foci—Karachi City (28 deaths), and Mirpur Khas town (9 deaths). Gujerat reported 96 cases and 26 deaths from 15 scattered centres, one of its districts—Kaira—remaining entirely free. The incidence of death per mille of population in the districts worst affected during the year was as follows :—Thana 0·43, Bombay City 0·22, Dharwar 0·14, Satara 0·11, Karachi 0·06 and Bijapur ·05. For the previous year the corresponding figures were ·05, ·46, ·04, ·02, ·15 and ·01 respectively.

52. No special measures, inoculation, etc., were taken.

53. The general opinion of officers of Medical and Health Departments is that the disease was in general of mild form but of rather more intensity than in 1922 despite the total death figures shewn above. There is reason to believe that many Influenza deaths go into the major headings "Fever" and Respiratory disease. The rise in the death curve for the latter in the early part of the year would be explained by the prevalence of Influenza (chart IV).

54. *Cerebro-Spinal Meningitis.*—Four deaths were reported from this disease in the village of Kalthana of Jalalpur taluka, Surat District, and one death from Mandvi town of the same district. Three (two local and one imported) cases were admitted to the Infectious Diseases Hospital, Poona. The Medical Officer in Charge gives the following history of the imported case which was the only one that proved fatal :—

"His illness commenced in Bombay with fever with later on retraction of the head and as he had been bitten by a dog 6 weeks previously hydrophobia was naturally suspected and he received anti-rabic treatment.

His ability to swallow food and drink without difficulty barred hydrophobia and it was found that the dog was still alive. He was transferred to this hospital on 29th May 1923 and died seven days later. His chief symptom was extremely severe pain in the spine."

Respiratory Diseases.

55. Mortality under this heading, though steadily diminishing, has not yet recovered to the pre-influenza year standard (*vide* Chart IV) which indicates that Influenza is still prevalent. 84,334 is the total number of deaths recorded for the year in review, against 82,682 in 1922 and 85,009 the decennial mean. The death-rate was 4·40 against 4·31 in 1922 and a quinquennial mean of 5·05.

The mortality for previous years is shown in the following table :—

Year.	Number of deaths.	Rate per mille.
1901 to 1910 mean ..	*57,723*	*3·12*
1911 to 1915 mean ..	*62,181*	*3·17*
1916 ..	79,882	4·08
1917 ..	90,667	4·63

Year.		Number of deaths.	Rate per mille.
1918	..	119,680	6·11
1919	..	98,633	5·04
1920	..	96,486	4·93
1921	..	93,336	4·87
1922	..	82,682	4·31
1923	..	84,334	4·40

56. Four of the Collectorates of Guzerat were mainly responsible for the high total mortality under Respiratory Diseases. The rise of mortality under "Respiratory Diseases" is probably due to the prevalence of "Influenza". This rise was highest in March synchronous with a peak in the mortality due to Fevers and Influenza. Respiratory sequelæ to measles (also prevalent early in the year) was probably an additional factor.

The highest rates were Surat 10·55, Broach 9·68, Kaira 8·78, Ahmedabad 8·42, Poona 5·54 and Ahmednagar 5·41. Bombay City also contributed to the rise as compared with 1922 with a death-rate of 13·27 as against 12·92.

Urban areas record much higher rates than rural, the result of congestion and consequent facility for spread of these diseases and probably also to more correct allocation of deaths under the head. The rates were urban 9·07, rural 3·27, compared with 8·93 and 3·20 in 1922. Ahmedabad City (16·54) shows the highest rate, Poona City next, 13·72 followed by Guzerat towns. Hyderabad (10·22), Karachi (9·91) and Nasik (8·22) also returned high rates.

57. *Phthisis.*—16,244 deaths from this cause were registered equivalent to a death-rate of 0·84 (which is one point above the 1922 rate) for the Presidency as a whole. By Registration Districts the total figures were Central 5,287, Guzerat 4,511, Southern 2,325, Western 2,185 and Sind 733 as compared in that order with 5,209, 4,329, 2,240, 1,954 and 781 in the previous year.

In Bombay City the deaths registered as from phthisis were 1,203, equal to a death-rate of 1·05 compared with 1,310 or a death-rate of 1·14 in the previous year.

The urban death-rate was 1·59 and the rural 0·66 against 1·60 and 0·64 in the previous year. The highest death-rates for urban areas were recorded in Bhiwandi (5·00), Alibag (4·00), Poona City (3·76) and Ahmedabad (3·56).

The highest death-rates for rural areas were recorded in the Districts of Ratnagiri (2·37), Kaira (1·70), Kolaba (1·55).

In defence of the good repute of Nasik, a favourite health resort for consumptives amongst others, a special record kept for the year showed that 54 of the phthisis deaths (males 17 and females 37) were amongst residents of Nasik while 22 (7 males and 15 females) were non-resident.

The Assistant Director of Public Health, Sind Registration District, states :—

"Majority of deaths from phthisis occurred among females which is due to prevalence of Purdah system."

The Health Officer of Hyderabad Municipality writes :—

"3,000 copies of Health pamphlet dealing with consumption and its prophylactic measures were printed and distributed free for guidance of general public in Hyderabad town. An anti-tuberculosis dispensary in Hyderabad town is one of its greatest needs from the point of public health. One of the most potent causes of the spread of this disease among the population of Sind is the universal habit of spitting in the houses indulged in by all classes. This combined with bad housing no doubt helps to spread the disease among the female population."

58. *Tuberculosis Institution.*—"The anti-tuberculosis dispensary in Karachi City is doing good work. During the year under report 1,468 patients attended the dispensary. On examination 366 cases were found to be suffering from tuberculosis and 179 of these were treated and are reported to be alive."

59. *Pneumonia.*—17,425 deaths were registered equivalent to a death-rate of 0·90 for the Presidency as a whole. The corresponding figures for 1922 were 15,995 and 0·83. On reviewing the figures according to Registration Districts, it is found that as in the case of the major heading, Guzerat with 3,850 deaths against 3,374 in 1922 again contributes a high proportion as it has done annually, since pneumonia was classified as a separate sub-head in 1919. The Central and Sind Registration Districts returned 1,466 and 2,053 deaths as compared with 1,800 and 1,241 for the previous year. For the Western and Southern Registration Districts the total deaths were 393 and 124 respectively compared with 399 and 121 in 1922. Bombay City registered 9,539 pneumonia deaths against 9,060 in 1922.

60. The urban death-rate was 3·64 and the rural 0·24 against 3·53 and 0·18 respectively in 1922. The highest urban death-rates were recorded in Poona City (8·04), in Sind towns including Hyderabad (5·12) and in Nadiad (4·79), Kirkee Cantonment (4·38) and Kalyan (4·32).

Dysentery and Diarrhœa.

61. The increase in Cholera deaths is partly reflected under this heading. 22,238 deaths were registered (11,929 males and 10,309 females) against 21,118 in 1922 and 32,738 the decennial mean. The death-rate was 1·16 against 1·10 in 1922, and 1·53 the mean for the previous five years.

62. The increase of 1,120 deaths affected for the most part the rural areas and is recorded under the sub-heading Dysentery rather than under the other and numerically larger sub-head. In other words the records tell us, as compared with last year, that rural areas suffered more severely from dysentery and less from diarrhœa while in the towns the converse was the case.

The number of deaths registered under Dysentery and Diarrhœa in previous years is as follows:—

Year.	Number of deaths.	Year.	Number of deaths.
1901 to 1910 mean	.. *52,919*	1919	.. 38,317
1911 to 1915 mean	.. *39,455*	1920	.. 29,895
1916	.. 34,187	1921	.. 26,799
1917	.. 36,321	1922	.. 21,118
1918	.. 32,058	1923	.. 22,238

63. The urban death-rate was 1·75 and the rural 1·02 against 1·77 and 0·94 respectively in 1922. The highest death-rates for urban areas were recorded in Pandharpur (5·24), Borsad (5·04); Kirkee Cantonment (3·75), Gokak (3·40) and Bhiwandi (3·28). A further fall is apparent in the intestinal diseases death-rate for Poona City, *viz.*, 1·82 against 2·00 in 1922 and 3·16 in 1921.

64. Impurities in the water-supply is associated with the death-rate under this heading and a perusal of past vital statistical records show the benefit to be derived firstly from the installation of a piped supply and later from attention to all the details of working it.

65. The following table gives the towns in which the dysentery and diarrhœa death-rate exceeds 2 per 1000 and shows also the quinquennial mean :—

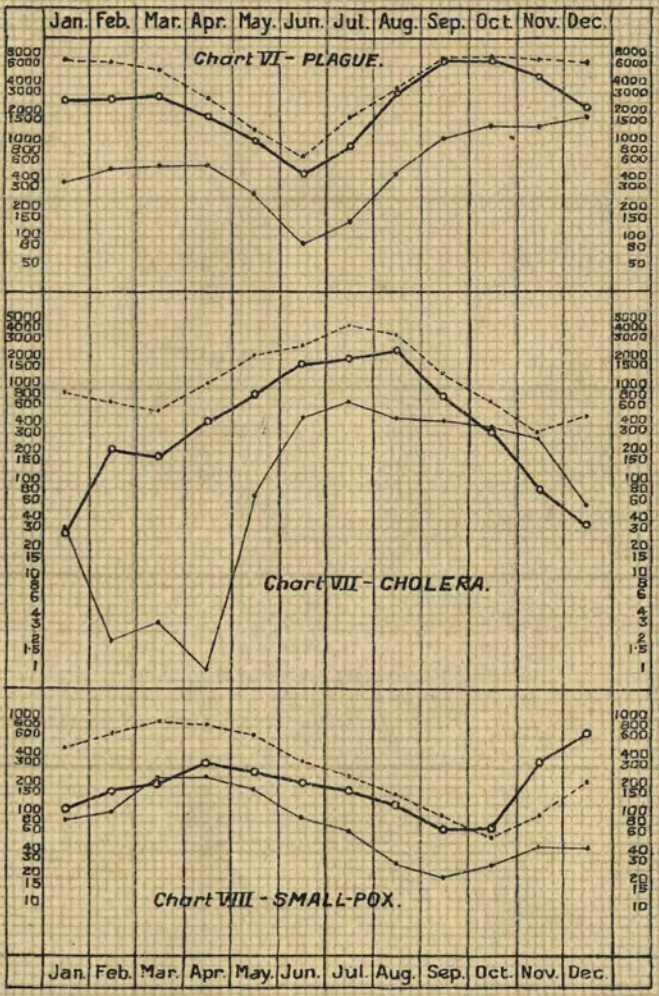
Towns.	Death-rate.	Mean.	Towns.	Death-rate.	Mean.
Dharangaon ..	2·16	1·32	Pandharpur ..	5·24	5·93
Nasirabad ..	2·29	3·13	Vengurla ..	2·30	1·94
Nasik ..	2·20	3·97	Gokak ..	3·40	3·50
Bhiwandi ..	3·28	2·22	Gokarn ..	2·29	3·97
Bombay City ..	2·84	3·69	Surat ..	2·23	1·94
Kirkee Cantonment ..	3·75	4·16	Borsad ..	5·04	4·21
Sholapur ..	2·29	2·81	Dakore ..	2·50	3·53
Barsi ..	2·04	2·87	Rohri ..	2·28	1·21

66. *Dysentery.*—Under this separate sub-heading, 5,214 deaths were recorded against 4,410, the death-rate being 0·27 against 0·23 in 1922. The rate for rural areas was 0.24 against 0·16 in 1922 while the urban rate shows a fall to 0·40 (from 0·50). Borsad (5·04) and Gokarn (2·17), Vengurla (1·88), Anand and Kurla (1·26) yield the outstanding figures for towns.

67. *Diarrhœa.*—17,024 deaths were recorded against 16,708. The death-rate was 0·88 against 0·87 in 1922. The urban death-rate was 1·34 and the rural 0·78 as compared with 1·27 and 0·78. 8 towns returned death-rate above 2 per 1,000 of population, viz., Pandharpur (5·12), Kirkee Cantonment (3·50), Gokak (3·30), Bhiwandi (3·28) Nasirabad (2·29), Sholapur (2·28), Rohri (2·20) and Barsi (2·04).

MONTHLY INDENCE OF DEATHS FROM EPIDEMIC DISEASES.

1923. ——o—— 1922. ——•—— 1911-20. Mean ·----·



Index figures are at intervals of Logs and represent actual deaths.

CHOLERA.

68. The number of deaths recorded from cholera was 9,221 against 2,768 in 1922 and 12,886 the decennial mean. The death-rate was 0·48 against 0·14 in 1922 a decennial mean 0·66 and a quinquennial mean 0·70.

The following table gives the deaths recorded in previous years :—

Year.	Number of deaths.	Year.	Number of deaths.
1900 ..	163,000	1912 ..	64,505
1901 ..	13,600	1913 ..	5,134
1902 ..	3,229	1914 ..	17,779
1903 ..	1,825	1915 ..	377
1904 ..	13,156	1916 ..	19,841
1905 ..	5,396	1917 ..	17,003
1906 ..	46,119	1918 ..	8,834
1907 ..	7,656	1919 ..	51,551
1908 ..	1,759	1920 ..	2,047
1909 ..	28,714	1921 ..	3,521
1910 ..	3,694	1922 ..	2,768
1911 ..	5,817	1923 ..	9,221

It will be noted that the epidemics of 1900, 1906, 1912 and 1919 were of great severity. All were years of abnormal monsoon.

69. In the Presidency proper 18 out of 20 districts were infected. Details for all districts are given in Annual Form No. VII.

The history of 1923 is late appearance of infection—only about one-third of the deaths up to end of June and thereafter movements of the people during pilgrimages provided the means of spreading the disease. Cholera is all but preventible and if it were possible to stamp it out before the season arrives, the scourge would be very considerably modified. Pandharpur and one or two pilgrim centres are provided with efficient sanitary and preventive arrangements but Pandharpur is only the chief centre of a sequence of pilgrimages to which the stream of pilgrims annually resort and for these the same efficiency in sanitary efforts during fairs is indicated. This, in my opinion, could only be effected by a comprehensive unified scheme of control over pilgrim taxes and sanitary measures by a central body over all pilgrim centres in the same group.

70. The heaviest incidence of cholera was in the Central Registration District with 6,963 deaths or three-fourths of the total. Three towns in particular suffered badly, *viz.*, Baramati, Junnar and Wai with a death incidence of 7·90, 6·37 and 6·17 per mille of population. Taking the Collectorates separately, their history is as follows :—

Sholapur and Satara Collectorates were earliest affected ; by May, Poona and Nagar also were reporting cases and the epidemic was at its height in July and August. In Ahmednagar incidence was almost general, 227 villages reporting cases and the total deaths reached 2,044 out of 4,479 (reported) attacks or a 45·6 per cent. case mortality. The incidence of death per mille of population was 2·83. Rahuri Taluka

was the first affected and dissemination was rapid along the Pravara. Places off that river and with wells as their source of drinking water escaped with 4 exceptions. Kopergaon Taluka attributed its infection to Rahuri and here also the rivers (Godavari and its branches) trace the line of spread.

Infection in Poona District was almost equally bad and persisted till so late as December—218 affected villages and a total of 2,098 deaths or 2·13 per 1,000 of population. The origin was in a village (Burdi) in Indapur infected from Malsiras Taluka. A party of Wadar coolies that caried the infection to Loni Kalbhor in April had 21 attacks and ten deaths after arrival and infected also the staff of the Railway station near their encampment. The source of water supply in common was a leakage-water drain and when this was put "out of bounds" the outbreak was checked. The District Railway Medical Officer arranged for a water wagon supply for his people and the wadars were directed to the regular village supply. It is noteworthy that there were no cases at any time in the village proper nor in a second, wadar encampment using the village water.

Sholapur District returned 1,409 deaths or 1·90 per mille of population and was invaded very early in the year. A sudden outbreak appeared during the Maghi Festival at Pandharpur; immediately cases were detected at Kurduwadi Junction, in Sholapur and in Madha Taluka. This seems to have proved the focus of subsequent spread to the above-named two districts and elsewhere.

Satara District (Khatav, Patan and Khanapur Talukas) was also infected early in the year like Sholapur by persons returned from the pilgrimage to Pandharpur. The total deaths reached 1,356.

71. In the Western Registration District, distribution of infection was also widespread less so than in the Central but in certain localities it reached a higher virulence. The total deaths were 1,298, 5 town circles and 100 villages reported cases while the epidemic lasted—April early to November.

Nasik District with 771 deaths suffered most. Malegaon City in the few days its epidemic lasted, showed an incidence of 11·47 deaths per mille of population, a figure higher than even that of Pandharpur (8·73) to which infection here (as elsewhere) is ascribed *via* Yeola town further south on the Ahmednagar Road. The history of the epidemic in Malegaon, as given by Dr. Munsiff, the Assistant Director of Public Health, is illustrative :—

"Out of 527 attacks and 234 deaths which occurred in Malegaon between the 18th August and the 2nd September, there were 481 attacks and 217 deaths among Mahomedans (15,154 population) and only 46 attacks and 17 deaths among Hindus (population 8,395). The comparative immunity enjoyed by the Hindus is due to the fact that they mainly depend on wells for their drinking water supply and these were regularly permanganated by the Municipal Health Staff. The high incidence among the Mahomedans, on the other

hand, could safely be attributed to three causes : (1) Their obtaining their drinking water supply from the river "Mosam", (2) The filthy habits of the Momins, and defective conservancy of this quarter and (3) Incidence of the Moharrum. The Municipality having reduced the conservancy staff last year as a measure of retrenchment, the conservancy of this quarter along with that of others—none of which were ever "over clean"—suffered in proportion, and this state of the town provided further fuel for the flame. Next to Malegaon, Yeola and Sinnar had the highest incidence of cholera during this season. The conservancy of both these towns (as well as that of Malegaon) is notoriously defective and the water supply of all three being liable to pollution, accounts for their paying a heavy toll."

Of Nasik City itself, the same Officer writes :—

"In spite of the heavy incidence of cholera all over this Division ; in the adjoining District of Ahmednagar ; at Pandharpur with which Nasik is in intimate contact through pilgrims and in Nasik District itself, in all there were only 6 cases and 5 deaths from cholera in Nasik City between the 6th June and 22nd August 1923, and 4 of these cases were imported."

"This singular immunity enjoyed by Nasik may be safely attributed to the pipe water supply, regular sterilization of both the drinking water and the sacred bathing tanks in the Godavari, and, last but by no means least, to a system of early notification by which all cases of epidemic diseases are promptly reported and timely measures taken to prevent the spread of infection."

It may be noted that Trimbak, a popular centre of pilgrimage in the same district, also enjoyed immunity which is attributable to its good piped water-supply regularly chlorinated and to the general sanitary measures exercised there.

Thirty villages of East Khandesh reported cases and the total of deaths was 170. West Khandesh recorded 176 deaths, Kolaba 21 and Bombay Suburban District of which five villages and one town circle (Kalyan) reported 15 attacks with 11 deaths.

72. Bombay City returned 186 cholera deaths against 14 in 1922.

73. The Southern Registration District, practically the only one in which cholera was epidemic in 1922 (2,665 deaths) was again attacked. There were 754 deaths during the year's epidemic, of which Bijapur Collectorate bore the brunt with 472, forty-six of its villages reporting cases. The infection of the chief epidemic period beginning in Indi village on 17th May was brought from H. E. H. The Nizam's Dominions along the main lines of communication. Dharwar District was next in order of severity—225 deaths. The path of the infection in Hubli was not definitely traced and that town itself became a focus of dissemination. This is difficult to understand as there is a modern filter plant for the town's water supply but some details (e.g., the filtered-water storage tank) are not satisfactory; also sanitation in the city is very imperfect.

Sangli State was the source of infection in the case of Belgaum and Athani Towns from which it spread to others in the same district. Gokak town in particular had a severe outbreak.

74. In Guzerat Registration District, deaths occurred in five separate points including Ahmedabad City but no epidemic followed and the total deaths were only 11. Sind also escaped lightly—9 deaths in all. Cases in Karachi City were from off calling ships and in Sukkur a boatman who arrived from the Punjab was the only source apparent for an outbreak that limited itself to 3 deaths in associated families. Larkana town was the only other place that recorded cholera deaths.

75. *Preventive Measures.*—For satisfactory preventive measures against this and other epidemics in districts generally each Local Board should create its own District Health Staff and arrange for more prompt notification of first cases. In the meantime the re-appointment is advisable of the small staff of special Sanitary Inspectors, 2 under each Assistant Director, to deal with village water supplies and instruct the people in prevention generally. They were disbanded for want of funds in 1922 after a successful 2 years' trial.

A grant of Rs.15,000 was allotted by Government for the year 1923-1924. Cholera treatments and potassium permanganate for sterilizing wells were widely distributed through the medium of Revenue Officers. Special medical officers were deputed for cholera duty by the Collector of Bijapur and the Civil Surgeon, Nasik. The Officers of the Public Health Department busied themselves on behalf of the larger centres of population and gave such advice and assistance as was possible in affected areas generally and in areas adjoining. Leaflets in the vernaculars were distributed.

Plague.

76. Following on four years of comparatively low plague incidence with a general downward trend in the mortality curve the year under report shews a recrudescence as was forecasted by the Public Health Commissioner with the Government of India in his report for 1921 (on India as whole).

77. During the year there were 33,741 plague deaths equal to death-rate per mille of 1·76 or quadruple the figure (0·44) for 1922.

The annual mortality from plague in this Presidency for 20 years is given below :—

Year.	Number of deaths.	Year.	Number of deaths.	Year.	Number of deaths.
1904	223,957	1911	100,399		
1905	71,363	1912	28,984	1918	79,478
1906	51,525	1913	25,288	1919	9,626
1907	93,609	1914	20,060	1920	13,857
1908	27,345	1915	43,824	1921	4,672
1909	24,316	1916	79,507	1922	8,379
1910	25,043	1917	162,874	1923	33,741

78. *Distribution.*—Dharwar and Belgaum are the chief plague centres of the Presidency year after year. Together with Satara, for the year under report, these three districts contributed two-thirds of the total plague mortality with death rates of 7·70, 6·17 and 7·30 respectively. For the rest, East Khandesh with a death rate of 3·51 and a total plague mortality of 3,776, Sholapur (2,944 deaths) and Poona, (2,185) suffered most severely. Bombay City returned 1,327 deaths or more than twice the incidence of the previous year. Karachi City recorded 457 deaths in its area and was responsible for some sporadic cases and deaths elsewhere in the province of Sind. Guzerat, except for an outbreak in Surat City that yielded 30 of the total 36 deaths for that Division, escaped epidemic and the Konkan beyond the vicinity of Bombay City shewed its usual comparative immunity.

The distribution of plague will be seen in detail in Annual Form XII.

79. *Southern Registration District.*—In Belgaum District 5,854 deaths from plague were recorded against 1,430 in 1922. Sampgaon, Belgaum, Murgod, Hukeri and Khanapur rural circles suffered heavily the per mille ratio being 21·56, 14·09, 11·61 and 7·34 respectively. Belgaum town circle in the centre of such severity of infection recorded in contrast as low a death rate as 0·58 and this must be attributed to the more prompt and active anti-plague measures that were taken by the Municipal and Cantonment authorities and, though rather late in the season, by the authorities of the Sangli State town—Shahapur, situated beside the City 46,438, 6,574 and 21,221 rats were caught and destroyed in the course of regular anti-rat campaign in these three areas. Inoculation was also available and for the district generally a Subordinate Medical Service Officer was placed on this duty. He visited 12 villages but only succeeded in performing 726 inoculations.

As stated above the year's epidemic was exceptionally severe in Dharwar district. 7,983 deaths were recorded against 2,138 in 1922 equivalent to a death rate 7·70 against 2·06 in 1922 and quinquennial mean of 3·01. Hubli, Dharwar, Kalghatgi, Bankapur and Hangal rural circles and most of the large towns as Hubli, Dharwar and Navalgund suffered heavily. Hubli town circle returned a death rate of 20·32. A temporary S. M. S. Officer was deputed by this Office to popularize anti-plague inoculation in this district. He visited 22 villages and performed 2,448 inoculations. Ratting operations were carried out in Gadag with the result that 8,580 rats were caught and destroyed.

In Bijapur district 338 deaths were recorded against 10 in 1922. For this district the severity of infection in Bagalkot town stands out. 7·76 per 1,000 of the population died of plague. Bijapur town and taluka were next in order of death rate with 1·00 and 1·23 respectively. The report for Bijapur town states that 836 rats were caught, a number far too small to have any effect in prevention.

In Kanara district the epidemic was practically confined to the above ghat area—Haliyal (194 deaths), Sirsi (71) and Mundgod (9) talukas combined recorded all but two of the total plague deaths.

80. In the Central Registration District 12,866 deaths were recorded against 2,038 in 1922, and 819 and 2,737 in the years preceding. 52 of the 79 circles in the Registration District were effected. October was the month of highest mortality. The Satara Collectorate had a very severe epidemic returning 7,486 deaths against 331 in 1922. All its 14 talukas and petas suffered, Karad, Satara and Khanapur being the most affected (1,752, 1,539 and 1,530 deaths respectively).

In Satara town circle practically 31 per 1,000 of the population died of plague. The Assistant Director reports that, "the first case occurred on the 6th of April and was reported to be indigenous. The highest mortality was in the month of September. The Municipality was advised to take precautionary measures against the spread of the disease. Anti-plague inoculation, evacuation and rat trapping operations were adopted but not vigorously. There were 9 attacks and 7 deaths within Panchgani Municipal area. The cases were indigenous. 43 cases were returned from Wai town. The Inspector of Sanitation and Vaccination visited the town and gave advice. Rat catching operations were carried out, 100 rats were caught daily. Anti-plague inoculation and the use of kerosine emulsion in every house were also resorted to." A temporary S.M.S. Officer was engaged for inoculation duty for Satara district. He visited 12 villages and performed 766 inoculations.

In Poona district 2,185 deaths were recorded against 1,268 in 1922. Six talukas *viz.*, Khed, Purandhar, Dhond, Poona City, Haveli and Mawal and five town circles were returning cases from the commencement of the year and only two (Junnar and Bhimthadi) of the twelve rural and one (Baramati) of the eight town circles remained free.

The Assistant Director reports that the—

Villages carrying over infection from the previous year were two in Khed, one in Indapur, two in Poona City talukas, nine in Haveli and eight in Mawal taluka. 119 or about a tenth of the villages in the district were ultimately infected.

702 deaths were reported from Poona City. Plague continued since last year. There was a lull during the months of June and July but it recommenced in August on importation of infection from Satara City and from Paud in Mulshi Peta. Anti-plague inoculation was carried out in the city. The total number of persons inoculated during the year was 8,211. Rat destruction campaign was also carried out throughout the year, but not vigorously. The total number of rats caught and destroyed was only 8,221 ; out of these 96 were examined and six found to be plague infected.

Rat-catching operations to the following extent were carried out by other local bodies: Poona Cantonment Committee 2,000; Kirkee 7,106, and Lonawla Municipality 5,760. Systematic examination as regards infection of rats caught was not done.

A temporary S. M. S. Officer was engaged for anti-plague work. He visited 4 villages and performed only 46 inoculations as people did not come forward.

Sholapur town recorded 223 deaths against 2 in 1922. Infection was imported from H. E. H. the Nizam's territory. Barsi town received its infection from the same source and had a severe epidemic resulting in 126 deaths during the 4 months it lasted. Inoculation was practised in both towns and in Barsi a large number of rats (some 65,000) were killed, but the campaign was not started till the enemy in the shape of infection was established within its gates.

In Sholapur District as a whole 2,944 deaths were registered against 388 in 1922. September and October showed the highest incidence of death. 4 out of the 7 talukas and all 3 town circles were affected.

A temporary S. M. S. Officer was engaged for anti-plague inoculation work. He visited 6 villages and performed 713 inoculations.

In Ratnagiri District 185 deaths were recorded against 34 in 1922.

81. In the Western Registration District 4,571 deaths were recorded against 1,318 in the preceding year. The quinquennial mean death-rate was 1·03. All districts were affected. East Khandesh headed the list with 3,776 deaths against 830. Out of this number Dharangaon, Parola, Amalner and Erandol towns reported 424, 184, 199 and 182 deaths respectively, while Amalner, Erandol, Pachora and Jamner rural circles (in that order) recorded 1,112, 607, 310 and 170 deaths.

West Khandesh District recorded 50 deaths and was free from plague in the preceding year.

Active and timely preventive measures are to be recorded for Dhulia the headquarter town of the district. Names of arrivals from infected places in communication (Amalner side, etc.) were noted. A vigorous campaign of rat destruction was carried out; over 58,000 rats were destroyed and in good time, *viz.*, before infection had reached there. Arrangements for anti-plague inoculation were also got ready. The cost of the measures something under Rs. 2,500 was well repaid as only 10 cases and 6 deaths occurred.

Nasik District suffered less than last year—11 deaths against 35. Its two chief towns, Nasik and Malegaon, escaped with a death-roll of 3 and 2 respectively. Malegaon carried out organised rat destruction throughout the year under a qualified Sanitary Inspector and special staff. Although the traps used were less than half the standard laid down, (475 instead of 1,175), a total catch of some 33,000 rats was effected. A poisoning campaign with Barium Carbonate was used as a finish to rid the town of its plague-producing rodents. These operations cost the Municipality less than Rs. 1,000.

In Thana District 496 deaths were recorded against 356 in the preceding year. The death-rate was ·65. Out of this Thana town contributed 63, Bassein 34, Bhivandi 33 and Kalyan town 37.

In Bombay Suburban District 139 deaths were recorded against 87 in the preceding year. The death-rate was ·91. Out of this Bandra contributed 40 and Kurla 4. The epidemic prevailed from January

to October. Cases were also reported from the Labour Camps of the Development Department. The Assistant Director of Public Health visited these Camps and gave full instructions to the Authorities concerned to check the further spread of the disease.

Kolaba recorded 99 deaths against 10 in 1922. The death-rate was ·17. The disease prevailed from January to May and again in October and November. All 4 of its town circles escaped infection except for a single (fatal) case in Mahad town circle.

82. In Sind Registration District 490 deaths were registered against 687 in the preceding year. The death-rate was ·15 against ·21 in 1922.

Out of these Karachi town contributed 457 or 93 per cent. of the total deaths from plague. The highest number of deaths was reported in May and the lowest in January.

Besides Karachi town plague deaths were reported from Tatta, Keti-Bunder, Hyderabad, Kandiaro and Tando Mahomed Khan towns. Karachi and Keti-Bunder talukas were also affected. Karachi town was the vector to all the abovementioned. Rat destruction operations were carried out by the Karachi and Hyderabad municipalities with the result that 63,685 rats were caught by the former and 39,244 by the latter.

83. Government expressed their inability to provide for the usual grant. It was expected that local bodies would take action when necessary. In October when plague mortality showed evidence of being on the increase. Five temporary S.M.S. Officers were engaged for inoculation for a period of 3 months in anticipation of Government sanction. They visited 56 villages and inoculated 4,699 persons. Inoculations were also performed by Civil Surgeon, Officers in charge Hospitals and Dispensaries, Medical Officers in charge Prison Hospitals, private medical practitioners and others. Inoculation outfits were supplied on loan from this office when required.

84. The total number of persons inoculated during the year under report was 145,395 as compared with 73,098 in the previous year. Out of these 127,728 were performed in British Territory and 17,667 in Native States.

During the year 233 cases of plague amongst persons inoculated were reported of which 60 proved fatal. Out of these, 60 were attacked during incubation period and 173 after incubation period; 20 died during incubation period and 40 after incubation period.

By districts the number of operations were 49,803 in Dharwar; 16,470 in Satara; 12,258 in Sholapur; 11,529 in Poona; 6,532 in East Khandesh; 5,436 in Belgaum. In the towns of Hubli, Poona, Sholapur, Wai, Satara, Amalner, Dharwar and Mahableshwar 11,646, 8,211, 7,356, 5,883, 4,822, 4,066, 2,953 and 2,438 inoculations respectively were performed and in Bombay City 10,579 (as against 9,876 in the preceding year). In Karachi Town 4,412 persons were inoculated by the Medical Officers in charge Medical Dispensaries and by the Health

Officer. In jails 7,245 inoculations were performed mostly in the Common Prison (4,646) and in Bijapur Prison (1,586).

85. Rat traps from the stock in use during the Belgaum-Dharwar operations in 1920 and 1921 were sold or lent to local bodies as required.

Note on trapping (from report on Plague in the Belgaum, Dharwar and Bijapur Districts, by Dr. K. A. Gandhi, D.P.H., Officiating Assistant Director).

"The essentials in a trapping campaign are—

(1) The best trap as proved by long experimental trial—the 'Wonder' type used in the proportion 5 traps per cent. of population.

(2) A fixed scheme of operations that will allow of every house being trapped once a week the town should be divided into sections for the purpose.

(3) Trap throughout the year but with increased energy in the 'off season' of plague—the hot dry season in this division.

(4) Use fresh bait—dough made from the staple food grain of the locality.

The incidence of plague during 1923 was more severe in the four districts of the division than what it was in 1922.

Trapping was carried out in 1923 in six towns and two villages of Belgaum, Dharwar and Bijapur districts. At no place were all the essentials detailed above attended to, except in Belgaum town circle and even here the number of traps used was only 2 per cent. of the population. At Khanapur, Chandgad and Gokak town circle and Bijapur town circle the trapping operations were commenced after the epidemic broke out, the period of operations varying from 1 to 6 months. At Gadag ratting operations were commenced in November, when the epidemic had died out and were stopped in December, so they could have no effect on the incidence of Plague.

A fairly good number of rats were destroyed at Shahapur, Khanapur Belgaum town circle and Gokak town circle; but except at Belgaum the campaign of rat destruction was not carried out systematically nor for the period required; hence good results were lacking. Besides at none of the places did the number of rats destroyed reach the required figure, *i.e.*, 2 rats per head of population—the number regarded as the necessary minimum for protecting a community from an epidemic following an epizootic.

Belgaum town being the head-quarter of the district and division, a centre of secondary education and holding a weekly bazaar, presents multiple chances of getting infected from without. This was specially so in 1923 when the surrounding talukas of Sampgaon, Murgod, Hukeri and Khanapur were badly infected, the plague mortality reported from these being 21·56, 11·61, 8·93 and 7·34 respectively. Besides, 37 villages in Belgaum taluka itself were infected. In spite of all this the

total number of plague deaths in Belgaum town circle was only 21 during 1923 giving a ratio of 0·58. Excluding imported cases the ratio works out to 0·25 only. These beneficial results in Belgaum town circle can be attributed to the systematic rat campaign; and the results would have been still better if traps were used on the 5 per cent. basis. Thus Belgaum may be cited as one more place demonstrating the efficacy of properly and intelligently carried out trapping campaign in keeping a place *practically* free from plague though surrounded by infected places and exposed to re-introduction of infection through imported cases. Experience at Satara and recently at Delhi and Belgaum has thus shown that an intensive rat campaign systematically and energetically conducted has a very definite effect in controlling and limiting plague in a large city and that too at a cost commensurate with the benefits derived.

In the light of our present knowledge this method holds out the greatest hope for freedom from plague for large cities and the more intensive such a campaign is the more likely it is to succeed."

Small-Pox.

86. 2,811 deaths from small-pox were registered against 1,170 in 1922 and a decennial mean of 4,262. The death-rate was 0·15 against 0·06 in 1922 and 0·21 the quinquennial mean. By sex, 1,438 were males and 1,373 females.

The annual mortality for previous years is given below:—

Year.	Number of deaths.	Year.	Number of deaths.
1901–1910 mean ..	*4,962*	1917	3,095
1911	4,727	1918	8,063
1912	6,331	1919	6,232
1913	9,833	1920	3,536
1914	4,209	1921	1,771
1915	1,425	1922	1,170
1916	3,289	1923	2,811

87. *Distribution.*—Detail figures are given in Annual Form No. VIII.

While all Collectorates except Nawabshah reported deaths, the incidence of death was chiefly in the Western Registration District, *e.g.*, West Khandesh 475, Nasik 465, Thana 150 and Kolaba 151. Bombay 475, Poona 260, Satara 126 and Ratnagiri 112 contributed most of the remaining deaths.

191 Registration circles and 608 villages were infected against 130 and 290 respectively in 1922.

Among towns Malegaon (12·57), Dhulia (5·89), Lonawla (2·87), Satara (2·13) and Alibag (1·90) reported the highest death-rates.

Of the 2,811 deaths, 726 were infants under 1 year and 1,428 children between 1 and 10 years of age.

December was the month of greatest severity, 640 deaths were recorded. A study of chart VIII will show that the small-pox year normally begins about October and reaches its full in March or April and then

declines. It was obvious, therefore, that the high mortality in December only indicated that the full force of the epidemic was yet to come and this has proved to be the case in the returns for the early half of 1924.

88. 762 attacks of small-pox were investigated during the year by the officers of the Department. Of these 421 were among the vaccinated and 341 among the unvaccinated. Of the former 35 died, giving a case mortality of 8·3 per cent. Of the latter 89 died, causing a case mortality of 26·1 per cent., over 3 times as great as among the vaccinated. The average age of vaccinated persons attacked by small-pox was 11 against 7 for the unvaccinated persons and the average age of the vaccinated persons fatally attacked was 11 against 3 for the unvaccinated. These figures directly indicate the saving in life that could be effected by vaccination and secondly by timely re-vaccination on the advent of infection. Organized opposition to this measure during the year was reported from some centres. It is also to be recorded that two District Local Boards—Ratnagiri and Thar and Parkar—selected vaccination as the activity in which they could conveniently economize and the latter Board actually reduced their staff to an extent that leaves two talukas altogether without vaccinators. Unfortunately, Thar and Parkar is the favourite hunting ground of roving inoculators who use live small-pox virus on their victims.

Injuries.

89. This definite cause of death is free from most errors of registration and varies but little from year to year. This year's total compared with the 1922 figure shows a fall of as much as 296—mostly in male deaths (male 262, female 34) as seen in the following table :—

Year.	Number of deaths.	Year.	Number of deaths.
1901–1910 mean ..	*6,879*	1919	7,896
1911–1915 mean ..	*7,624*	1920	7,721
1916	8,096	1921	7,888
1917	7,650	1922	7,810
1918	7,761	1923	7,514

90. Further comparisons arranged under the various heads are set forth in the following table :—

Causes.	1923.			1922.		
	Male.	Female.	Total.	Male.	Female.	Total.
Drowning ..	1,136	1,617	2,753	1,303	1,652	2,955
Poisoning ..	82	40	122	70	29	99
Hanging ..	181	66	247	136	68	204
Wounding ..	900	460	1,360	1,194	508	1,702
Wild Beasts ..	44	13	57	32	9	41
Snake-bite ..	794	476	1,270	902	503	1,405
Rabies ..	161	75	236	100	60	160
Railway accidents ..	131	40	171	145	27	172
Other causes ..	789	509	1,298	598	474	1,072
Total ..	4,218	3,296	7,514	4,480	3,330	7,810

91. 1,270 deaths were attributed to snake-bite against 1,405 in 1,922. The highest number occurred in Ratnagiri 261, next in order being Thana 115, Satara 95, Kaira 72, Ahmedabad 69, Thar and Parkar 59 and Kolaba 48, while only 5 deaths were reported from Bombay City.

In Southern Registration District, there were 111 deaths from snake-bite. Of these 74 were among males and 37 among females. 83 deaths were inquired into. In 30 cases the snake was identified as cobra and in these the interval between bite and death varied from 1 hour to 16 hours.

In Guzerat R. D. 228 deaths from snake-bite were reported. Of these, 124 deaths were caused by " black serpents ", 21 by " Cobras "; while 55 deaths were caused by other, the species being unknown. The interval between bite and death varied from 1 to 48 hours in the case of " black serpents " and a few minutes to 24 hours in the case of " Cobras ".

In Sind 191 deaths were due to snake-bite—144 deaths were identified as being due to " Vipers " and 18 to " Cobras ". The duration between the bite and death varied from 1 hour to 8 days.

92. Deaths from Rabies show an increase to 236 (161 males and 75 females) as compared with 160 in 1922 and 173 in 1921. Poona District recorded 31 of which there were 11 in the city. Ahmedabad, Satara and Kaira districts reported 33, 25 and 24 deaths, respectively.

93. Deaths by suicide which were below the average in the two previous years have again increased to 518, the increase being mostly for males. The figures are :—males 321 ; females 197, against 285 and 202 in 1922. The methods adopted in the seven districts that returned the highest number of deaths are tabulated below :—

Name of District.	Drowning.	Poisoning.	Hanging.	Wounding.	Total.
Bombay City ..	14	40	11	32	97
Dharwar ..	11	2	45	2	60
Bijapur ..	4	1	52	..	57
Thana ..	5	2	25	..	32
Belgaum ..	5	1	22	..	28
Kaira ..	11	2	13	..	26
Surat ..	18	1	3	..	22

OTHER CAUSES.

94. 140,154 deaths (70,879 males and 69,275 females) were registered as compared with 130,766 in 1922 and the decennial mean 152,043.

The annual number of deaths registered under this head in previous years is as follows :—

Year.	Number of deaths.	Rate per mille.	Year.	Number of deaths.	Rate per mille.
1901-1910 mean ..	*140,618*	*7·61*	1919 ..	150,156	7·67
1911-1915 mean ..	*144,911*	*7·40*	1920 ..	141,662	7·23
1916 ..	165,382	8·44	1921 ..	134,263	7·01
1917 ..	181,877	9·29	1922 ..	130,766	6·82
1918 ..	184,787	9·43	1923 ..	140,154	7·31

95. *Deaths from child-birth.*—4,400 deaths were reported under this sub-head against 4,203 in 1922. For the Western, Central, Southern, Gujerat and Sind Registration Districts, the total deaths were 1,201 ; 743 ; 770 ; 399 and 1,192 respectively, as compared with 1,411 ; 817 ; 738 ; 367 ; and 789 in 1922. In Bombay City 95 deaths were recorded during the year against 81 in 1922.

Taking the Presidency as a whole, one woman was reported as having died as the result of child-bearing to every 155 live births as compared with one per 148 in 1922. The urban and rural figures are (one per) 83 and 182 against 90 and 166 in the preceding year.

Amongst Collectorates, the toll of life exacted by child-birth is greatest in Kanara, where a mother died for every 57 births registered.

In Districts near Bombay City the figures are also adverse, *e.g.*, Kolaba 1 per 102, and Thana 1 per 106. Elsewhere the highest maternal mortality is shown by West Khandesh 1-133, East Khandesh 1-156, Poona 1-149 and Dharwar 1-152. In the Sind districts, rates are still higher, *e.g.*, Sukkur, 1 maternal death to 35 births, Larkana 1 to 44 but here default in birth registration renders the figures unreliable.

In Bombay City one mother died for every 217 births as compared with 248 in 1922. Amongst towns Ahmedabad shows a figure of 82, Karachi 72 and Hyderabad 88 births per maternal death, while for Poona, Surat and Shikarpur the appalling rates (38,44 and 8 respectively) though in part the result of neglect in registration of births in those towns, show the urgent necessity for improving the conditions under which women bring forth children. The Assistant Director of Public Health, Sind's investigation of the matter in Shikarpur

"....revealed the fact that these cases are undoubtedly caused by puerperal sepsis due most probably to the unclean hands of 'Dais' or untrained nurses who generally conduct cases of labour. The Lady Doctor of the local Hospital for women was also of the same opinion. It is a pity that so many lives are being sacrificed every month which are easily preventible. The only remedy seems to be to get the 'Dais' under control and educate them in modern ways of conducting labour cases. This can be done if they are induced to come to the local Women's Hospital for a couple of months for instructions during which time they could be given some remuneration by the municipality. The expense will be more than repaid by the saving in valuable lives. The employment of a qualified Health Staff (which the town badly needs for general health purposes) and 2 Lady Health Visitors would be able, I am sure, to achieve appreciable results within a short time."

The Assistant Director of Public Health, Central Registration District, reports :—

"The number of deaths from child-birth is closely related to infantile mortality. The total deaths under this head recorded were 743. This, however, is not a correct picture as the cause of death is frequently wrongly entered. In towns a large number of women go especially for their first confinement to their mother's house outside towns and should they die there, their deaths are not recorded under this head. With such heavy mortality among the educated classes, one can well realize what the condition is likely to be in the villages where there is no medical aid available. Efforts made to reduce infantile mortality will automatically reduce deaths from child-birth."

96. The number of deaths from the Chief Causes for each Collectorate by months, are shewn in Annual Forms Nos. VII to XII.

SECTIONS VII AND VIII—No remarks.

SECTION IX.

SANITARY WORKS—CIVIL.

MUNICIPALITIES.

97. The abolition of three municipalities during the year 1923—Dholera in Ahmedabad, Mahuda in Kaira and Khed in Poona Districts—reduced the number of municipalities to 156 with a population of 2,670,179. The aggregate income for them all during the year was Rs. 18,020,697 of which Rs. 12,271,154 or just 68 per cent. was raised by taxation, giving an incidence, per head of population, of Rs. 4-9-7 which is an increase of eight annas and eight pies per head compared with the previous year. Taxation varied between Rs. 12 per head in Karachi City and annas 6, pies 8 in the small municipality of Betavad in West Khandesh. The figures include the special conservancy cess in the case of many municipalities.

The following statement shows the incidence of income and taxation per head of population in the larger municipalities :—

	Incidence per head of population of	
	Income.	Taxation.
Karachi	17	12
Hyderabad	11	6
Ahmedabad	8	7
Poona	7	5
Surat	6	4
Sholapur	6	4

The expenditure on public health measures in Karachi City equalled Rs. 6 per head of population and averaged slightly under Rs. 2 for all the remaining municipalities.

The following table shows the death-rate amongst the municipal population in each district. Out of 156 municipalities, 77 suffered from plague, 56 from small-pox and 58 from cholera, while 13 recorded cases of influenza.

Statement showing by districts combined birth and death rates for Municipalities in the Bombay Presidency during the year 1923.

District.	Number of Municipalities.	Ratio of Births per 1,000 of population.	Ratio of Deaths per 1,000 of population.				
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.
Ahmedabad	9	39·83	·01	·01	·01	·02	35·05
Kaira	8	39·31	·02	·39	·01	·00	32·40
Panch Mahals	2	22·61	·00	·00	·02	·00	15·80
Broach	3	44·04	·00	·02	·00	·00	30·53
Surat	3	25·41	·00	·08	·02	·01	28·74
Thana	4	24·08	·98	·59	2·68	·02	24·72
Ahmednagar	4	26·44	0·13	0·02	0·14	..	17·67
East Khandesh	12	33·91	·21	·19	6·07	·01	23·68
West Khandesh	7	36·62	·55	2·72	·08	·04	23·46
Nasik	7	30·88	2·87	2·87	·04	..	28·06
Poona	11	18·30	1·40	·61	4·42	·01	34·36
Satara	12	22·51	1·34	0·70	9·26	..	29·52
Sholapur	5	32·75	1·51	0·10	2·15	..	40·56
Belgaum	6	32·66	·33	·03	1·63	·05	20·69
Bijapur	4	36·67	·05	..	2·48	..	28·86
Dharwar	10	29·06	·12	·01	9·87	·28	37·14
Kanara	8	31·53	·13	·01	5·78	·14	29·78
Kolaba	7	22·14	..	·34	1·19	..	20·59
Ratnagiri	4	27·84	·04	·03	..	..	18·24
Karachi	5	41·54	·01	·19	2·12	·12	30·52
Hyderabad	6	36·45	..	·12	·03	..	23·07
Sukkur	5	30·92	·01	·09	·01	..	26·64
Larkana	5	30·58	·05	·03	..	..	24·08
Nawabshah	2	13·58	..	..	·33	..	9·63
Thar and Parkar	2	14·25	..	..	..	..	24·59
Upper Sind Frontier ..	1	20·32	..	..	..	..	19·66
Bombay Suburban District ..	4	16·49	·08	·08	·68	..	18·57

In 8 Revenue Districts as compared with 5 in 1922 the municipal death-rate exceeded 30 per 1,000 of population. The districts showing this high figure suffered from plague, small-pox and cholera.

Complete sanitary surveys were made by the Assistant Directors of Public Health in 8 in the Western Registration District, 3 in the Central Registration District, 2 in the Guzerat Registration District and 5 in Sind; and advice in sanitary matters was given by these officers in 60 towns. Action was taken by many of the municipalities in matters of conservancy, water-supply, the prevention of spread of epidemics and in measures of a more general nature. The following is a brief summary of these :—

Amalner and Malegaon :—Public latrines for males and females were provided; *Bhusawal, Faizapur, Dhulia* and *Hubli*—constructed new gutters; *Nandurbar*—constructed one open drain 600 ft. in length; *Igatpuri*—constructed a new drain at a cost of Rs. 2,185 and conducted a rat

campaign at a cost of Rs. 454. *Bandra*—repaired the dumping ground for sullage on the creek at Bunderwadi and laid a cast-iron pipe drain at a cost of Rs. 1,811 to discharge sullage below ebb-tide level. This measure has considerably improved the sanitation of the locality. A one-ton motor vehicle for removal of the town sweepings was purchased. *Matheran.*—Some latrines in the catchment area of Lake Charlotte were reconstructed according to an approved pattern on an approved site. *Belgaum*—acquired land at a cost of Rs. 2,243-14-6 for trenching night soil on the Nasik system. *Gokak, Saundatti, Bail-Hongal, Haveri, Bijapur* and *Bagalkot* removed prickly-pear. *Kapadvanj, Mehmedabad* and *Tatta* made improvements to wells. *Guledgud, Karwar* and *Anand*—purchased sanitary implements. *Nadiad*—spent Rs. 231-7-7 in constructing 6 blocks of latrines. *Bagalkot*—spent Rs. 2,960 in constructing 600 feet of drain. *Dakore*—notices were issued and 82 complaints were lodged for selling adulterated milk and for infringement of sanitary laws. *Larkana*—constructed a slaughter-house for goats.

The Nasik system of trenching night-soil is in satisfactory operation in 11 towns in Guzerat. In Nadiad town the sale of the poudrette realized Rs. 948, in Dohad Rs. 125 and in Viramgam Rs. 37-8-0. The system has been introduced also in Malegaon, Dhulia, Dharangaon, Bhusaval, Jalgaon, Sukkur and Godhra.

A large number of municipalities remain below standard in conservancy establishment and sanitary implements. Endeavours are, however, being made in the following towns and cities to increase their establishment :—Ahmedabad, Surat, Broach, Bulsar, Anand, Kapadvanj, Viramgaon. Dakore, Dholka, Umreth, Shirpur, Nandurbar, Bhusaval and, Sukkur.

98. *Municipal Health Staff.*—During the year under report Medical Officers of Health with full qualifications were employed in Karachi, Hyderabad, Surat, Poona and Ahmedabad and in Karachi a qualified Assistant Health Officer was employed. Health Officers holding the medical degree of the Bombay University in addition to the passing the Sanitary Surveyers' course were employed at Bandra and Sholapur, Nasik, Dakore and Nadiad employed Medical Officers with the Public Health qualification of Sanitary Inspectors. Pandharpur has as Health Officer a medical man of great experience of pilgrimages, epidemics etc., though he holds no academic qualifications in Public Health.

One hundred and twelve students attended the class for training Sanitary Inspectors held by the Executive Health Officer, Bombay. Eighty-eight appeared and of these 69 passed the examination and obtained the certificate of the Royal Sanitary Institute, London. Amongst the successful candidates there were 2 graduates in Engineering, and two men from this Department. More advanced classes were held simultaneously for the medical men and at a further examination 11 out of 26 were granted by the examiners certificates of capability to fill posts as Health Officers of 2nd Class towns.

The supply of Health staff is now nearly sufficient for the needs of all towns in the Presidency that would be expected to employ them.

The secretarial work in connection with these examinations has been taken over by the Director of Public Health, *vide* Government Resolution, General Department, No. P-72, dated the 27th July 1923.

Seventy-one Sanitary Inspectors were employed in 31 towns as follows :—Ahmedabad 16 ; Sholapur 8 ; Surat 8 ; Poona 6 ; Karachi 4 ; Sukkur 2 ; Ahmednagar 2 ; Hubli 2 ; and in the following 1 each Belgaum, Dharwar, Gadag, Byadgi, Bijapur, Bagalkot, Pandharpur, Barsi, Satara, Bulsar, Panchgani, Dhulia, Jalgaon, Bhusawal, Malageon, Trimbak, Thana, Kalyan, Kurla, Bandra, Broach, Larkana and Rohri. In 1922 there were only 62 men of this class distributed among 29 towns.

The municipalities of Prantij, Jambusar, Bulsar and Kapadvanj rely upon any medical officers amongst their councillors for advice in sanitary matters, while Sanand municipality pays the Dispensary Medical Officer an allowance of Rs. 10 per memsem for such advice.

Local Sanitation by Dispensary Medical Officers :—In the Central Registration District, advice was given by the Sub-Assistant Surgeons to the municipalities of Saswad, Sirur, Alandi, Jejuri, Baramati, Talegaon-Dabhade, Sangamner, Karmala, Sangola, Madha and Chiplun.

99. *Sanitary Board*.—A separate and fuller report by the Sanitary Engineer as Secretary to the Sanitary Board will be found in Appendix I.

100. *Town Improvement Schemes*.—No town improvement scheme for which Government grants were provided were completed during the year.

101. *District and Taluka Local Boards*.—During the year under report one District and two Taluka Local Boards were created. The combined income of the 27 District Local Boards and 221 Taluka Local Boards amounted to Rs. 1,48,98,144. Income and taxation per head of population were 15·1 and 3·1 against 13·8 and 3·4 annas in 1922. A total sum of Rs. 21,01,883 was spent by these bodies on communications while Rs. 3,00,752 were spent on public health work.

Under Government Resolution, General Department, No. 1570 of 5th October 1923, the following grants were placed at the disposal of the Commissioners of Divisions for distribution among the District Local Boards of the Presidency and Sind. These grants are used to improve communications and objects other than educational. The distribution was as shown below :—

	Rs.
Northern Division	2,75,000
Central Division	3,00,000
Southern Division	2,25,000
Sind	3,00,000

Government also sanctioned a grant-in-aid of Rs. 1,20,000 for improvements of village water-supplies in the General Department No. 2429 of 9th April 1923 which was distributed as follows :—Northern Division

32,000; Central Division 36,000; Southern Division 20,000 and Sind Rs. 32,000.

These grants were supplemented by allotments from Local Funds and popular contributions and were expended in constructing wells, tanks, troughs and cisterns, in repairing old wells and closing step-wells, in deepening existing tanks and in boring and jumper operations.

One hundred and forty-six step-wells were converted into draw wells, out of which 30 were in Ahmednagar and 53 in Ratnagiri Districts. Four hundred and ninety-two draw wells were newly constructed, 108 of them being distributed among 40 villages of the Kanara District.

102. *Acquisition of lands for the extension of village sites.*—Progress in this direction may be summarized as follows :—

Poona District.—No land was acquired to relieve overcrowding in villages. Two acres and 13 gunthas were acquired for the creation of Wadi gaothan in Taluka Bhimthadi on general sanitary grounds. Planning was attended to in laying out the gaothan pieces.

West Khandesh.—In Mhasdi, Sakri Taluka, land was acquired with the object of relieving over-crowding. Steps have been taken to pay compensation to the persons concerned and the land has been laid out into 202 plots with main roads 30 feet wide running from east to west and south to north and side lanes of 20 feet.

Belgaum.—Lands in Jangumhatti, Chandgad Taluka, Bilkundi and Kulgod in Gokak Taluka and Hindalge in Belgaum Taluka were acquired either with the object of relieving over-crowding or for general sanitary purposes.

Bijapur.—Fifty-four villages are in need of additions or new gaothans. Of these, in 21 villages acquisition proceedings are completed and plots are handed over; in 4 villages Government land is added to gaothan and in 29 acquisition proceedings are going on.

Kanara.—Village site has been laid out at Shirkuli in the Ankola Taluka for tanners.

Ahmedabad.—In Valod in North Daskroi Taluka, 3 acres and 14 gunthas assessed at Rs. 91 held on new tenure were acquired for village site in exchange for Government waste.

Village planning is reported to have been attended to.

Nawabshah District.—In two villages, Tharushah and Mithiani, Taluka Naushahro, lands were acquired to relieve over-crowding and the layout was approved by the Collector.

103. *Notified areas.*— Nine Notified Area Committees were converted into Village Panchayats and a new Notified Area Committee at Kandivali is created. There were 21 Notified Area Committees in the Presidency.

The population served by these Committees during the year was 72,044 and the total income from revenue excluding opening balance came to Rs. 2,79,850 giving an incidence of income per head of Rs. 3-14-0.

The following tables show the details of income and expenditure and the combined birth and death-rates for notified areas in each district.

Income and expenditure of the Notified Area Committees during the year 1923–1924.

District.	Serial Number.	Names of towns and villages.	Population.	Income including opening balance.	Expenditure.	Closing balance.
Bombay Suburban District ..	1	Andheri ..	6,211	63,743	50,385	13,358
	2	Borivli ..	5,957	18,842	16,879	1,963
	3	Malad ..	8,520	25,211	18,793	6,418
	4	Santa Cruz ..	6,092	100,653	99,324	1,329
	5	Ville Padle ..	7,479	33,690	32,706	984
	6	Kandivali ..	3,444	8,086	4,427	3,659
Nasik ..	1	Manmad ..	7,260	29,098	17,766	11,332
Ratnagiri ..	1	Rajapur ..	6,349	24,546	21,093	3,453
	2	Khed ..	3,842	3,560	2,453	1,107
	3	Dapoli ..	2,689	7,440	5,641	1,799
Kanara* ..	1	Castle Rock ..	741	4	..	4
Sukkur ..	1	Koti Sultan ..	1,696	1,471	775	696
	2	Mirpur ..	1,680	2,139	1,461	678
	3	Ubarao ..	1,716	2,248	1,904	344
	4	Daharki ..	2,095	3,495	2,982	513
Nawabshah ..	1	Naushahro ..	3,400	3,942	2,958	984
	2	Kandiaro ..	3,013	1,498	1,231	267
Larkana ..	1	Mehar ..	2,746	17,323	10,403	6,920
	2	Khairpur Nathan Shah ..	1,484	2,553	2,040	513
	3	Dadu ..	2,996	4,432	3,755	677
Hyderabad ..	1	Tando Jam ..	2,634	4,916	2,113	2,803
	21		72,044	358,890	299,089	59,801

* This Notified Area Committee could not do any work for want of funds. The question of local taxation is under consideration.

Statement showing by districts combined birth and death rates for Notified Areas in the Bombay Presidency during the year 1923.

District.	Number of notified areas.	Ratio of births per 1,000 of population.	Ratio of deaths per 1,000 of population.				
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.
Bombay Suburban District ..	6	12·02	..	·03	1·02	..	10·95
Nasik	1	17·86	·50	..	..	..	10·19
Ratnagiri	3	28·69	..	·81	·07	..	23·94
Kanara	1	..	..	..	..	..	..
Sukkur	4	33·72	..	..	..	..	23·58
Nawabshah	2	26·35	..	..	·31	..	12·47
Larkana	3	31·27	..	..	..	..	1·40
Hyderabad†	1	..	..	..	..	..	..

† Population not available.

Works of sanitary utility were carried out by Notified Area Committees at Manmad and Borivli. Repairs to slaughter-house at a cost of Rs. 150 by the former and improvements in conservancy by the latter.

Advice on Public Health matters was given by the Assistant Director of Public Health, Sind Registration District, to the Notified Area Committees at Khairpur Nathan Shah and Mehar (Larkana District).

104. *Village Sanitary Boards.*—The following statement shows the income and expenditure of Village Sanitary Boards during the year under report :—

Statement showing by Districts the income and expenditure of the Village Sanitary Boards in the Bombay Presidency during the year 1923.

District.	Number of village sanitary Boards.	Name of village.	Popular contribution.	Total income including opening balance.	Total expenditure.	Closing balance.
Kanara ..	1	Kondli, Balikop, Hosur } Siddapur ..	106	172	..	172
Thana ..	1	Gholwad Bordi ..	29	1,790	1,381	409

105. *Sanitary Committees.*—During the year only one new Sanitary Committee was formed at Bakshapur in Upper Sind Frontier District.

There were 376 Sanitary Committees as compared with 420 in 1922; the reduction in number being due to the establishment of the Village Panchayats.

Detailed information regarding income and expenditure and the birth and death rates for the population under the administration of Sanitary Committees are given by Districts in the following two tables :—

STATEMENT E.

Statement showing by Districts the income and expenditure of the Sanitary Committees in the Bombay Presidency during the year 1923.

District.	Number of Sanitary Committees.	Total income including opening balance.	Popular contribution.	Total expenditure.	Closing balance.
		Rs.	Rs.	Rs.	Rs.
Ahmedabad	....	....	....	....	....
Kaira	29	43,122	9,565	22,329	20,793
Panch Mahals	5	6,808	2,109	6,057	751
Broach	27	31,420	6,346	14,491	16,929
Surat	....	19,140	6,469	15,694	3,446
Thana	11	15,572	2,818	9,548	- 6,024
Total, Northern Division ..	94	1,16,062	27,307	68,119	47,943
Ahmednagar	....	....	....	....	....
East Khandesh	....	....	....	....	....
West Khandesh	....	....	....	....	....
Nasik	17	15,627	2,427	4,788	10,839
Poona	2	964	120	763	201
Satara	....	....	....	....	....
Sholapur	....	....	....	....	....
Total, Central Division ..	19	16,591	2,547	5,551	11,040
Belgaum	13	22,453	3,905	6,008	16,445
Bijapur	....	....	....	....	....
Dharwar	25	23,148	4,239	7,796	15,352
Kolaba	14	7,784	1,663	3,086	4,698
Ratnagiri	2	1,835	500	1,535	300
Total, Southern Division ..	54	55,220	10,307	18,425	36,795
Karachi	40	36,148	6,769	15,234	20,914
Hyderabad	39	41,057	7,244	21,299	19,758
Sukkur	17	16,430	4,314	10,293	6,137
Larkana	48	28,635	9,673	17,474	11,161
Nawabshah	26	38,162	9,420	21,867	16,295
Thar and Parkar	26	35,320	7,308	16,034	19,286
Upper Sind Frontier ..	12	19,577	4,084	12,240	7,337
Total, Sind Division ..	208	2,15,329	48,812	1,14,441	1,00,888
Bombay Suburban District ..	1	5,087	2,858	3,115	1,972
Grand Total ..	376	4,03,202	88,973	2,06,536	1,96,666

STATEMENT F.

Statement showing combined birth and death rates for Sanitary Committees in the Bombay Presidency during the year 1923.

District.	Number of Sanitary Committees.	Ratio of births per 1,000 of population.	Ratio of deaths per 1,000 of population.				
			Cholera.	Small-pox.	Plague.	Influenza.	From all causes.
Ahmedabad ..	....	....	..	..	..	..	....
Kaira	29	32·79	·00	·03	·00	·00	22·91
Panch Mahals ..	5	39·73	·00	·06	·00	·00	26·96
Broach	27	35·59	·00	·00	·00	·02	25·26
Surat	22	34·93	·00	·00	·06	·11	26·29
Thana	11	27·70	·08	·33	·86	..	19·15
Ahmednagar ..	....	....	..	..	..	..	....
East Khandesh ..	....	....	..	..	..	..	....
West Khandesh ..	....	....	..	..	..	..	....
Nasik	17	47·89	1·38	·14	..	..	24·32
Poona	2	38·12	4·45	..	3·18	..	30·18
Satara	....	....	..	..	..	..	....
Sholapur	....	....	..	..	..	..	....
Belgaum	13	37·20	..	..	11·14	..	30·92
Bijapur	....	....	..	..	..	..	....
Dharwar	25	39·15	·31	·05	8·67	..	31·51
Kolaba	14	33·76	..	·89	..	..	23·86
Ratnagiri	2	28·51	..	..	2·15	..	26·36
Karachi	40	26·47	..	..	..	..	18·17
Hyderabad ..	39	23·81	..	..	..	..	20·08
Sukkur	16	38·77	..	..	..	..	29·12
Larkana	47	25·74	..	..	..	..	15·44
Nawabshah ..	26	29·95	..	..	..	..	21·38
Thar and Parkar ..	26	31·47	..	..	..	..	23·36
Upper Sind Frontier ..	12	34·77	..	..	..	..	26·17
Bombay Suburban District	1	20·53	..	..	..	..	12·28

The Assistant Directors of Public Health visited 38 Sanitary Committees' Areas. Examples of useful work done by some of these bodies are as follows :—

The Nampur Committee sterilized wells with potassium permanganate, Pimpalgaon Baswant and Mahim constructed gutters. Goregaon removed silt from the wells. Birwadi paved streets. Mahar arranged to get a well bored. Saopir, Khahi, Rahu, Khoiewah, Samro and Khipro made improvements to wells. Bhiria provided 15 houses with cess-pools.

SECTION X.

GENERAL.

Public Health Laboratories.

106. The Poona and Karachi Public Health Laboratories continued their valuable work. The establishment of a third laboratory at Ahmedabad has been administratively sanctioned by Government but is held in abeyance for want of funds.

Besides matters connected with water-supply and sewage installations, etc., there is a large field of public health work for which these laboratories are equipped but except to some extent in the case of the Karachi Laboratory only they have not yet been availed of by the public bodies. I refer to the examination of samples of food. A similar laboratory kept up by the Bombay Municipality is mainly employed in this branch of Health work and dealt with over 3,000 samples of milk, milk-products and other food-stuffs. On the passing of a Food and Drugs Act, the Poona and Karachi Laboratories will be found capable of extending their activities in this special line but there seems no reason why the local municipalities should not begin to keep a check on the quality of the foods sold to their people.

Poona Laboratory.—Dr. J. L. Pinto, D.P.H., was in charge till 12th February 1923 when Dr. J. B. Mama, D.P.H., took over. A large amount of analytical work mostly in connection with water-supply was carried out during the year. Routine bacteriological examination of samples from the three main supplies of Poona, *viz.*, the Camp, City and Kirkee, was carried on as in past years so as to maintain a check on the efficiency of each stage of the processes of purification. Thus:—

The samples from Poona Water-Works included 265 of Raw Canal water, 224 settled water, 321 alumed water, 276 filtered water and 276 of the chlorinated water.

Close on 50 samples from service taps supplied by the three different Service Reservoirs were also examined.

Raw Canal water 235 samples, alumed 30 and 75 tap samples (after chlorination) were analysed for the Poona City supply.

There are two other installations in Poona, *viz.*, the Pashan Slow Sand Filters serving Ganeshkhind and East Kirkee all the year round and Kirkee except in the dry season; and the water works at Holkar's Bridge supplying Kirkee during the dry season, the Mula river water being converted into good potable water by means of rapid filters and chlorination.

The number of samples, examined was :—Pashan chlorinated 97, Mula River raw water 6, Holkar's Bridge filtered 25 and Holkar's Bridge chlorinated 52.

Ninety-nine water samples were received from several municipalities, prisons, distillery, tanks, etc., and 149 were examined for experimental purposes. The total for the year was 2,711 samples examined bacteriologically and 3,044 chemically.

The following change in the routine at the Cantonment Water-Works was introduced from 22nd July to 7th October, the period when the Canal water is heavily charged with red silt held in emulsion by colloidal clay. Alum was added to the raw water at its entry into the settling tanks instead of at the point when it leaves them to enter the filters. This procedure was found to effect a fair degree of sedimentation in the tanks, in addition to leaving sufficient alum flock for filtering purposes by the time the water entered the filters. The practice relieves most of the extra load on the filters and is, therefore, an economy. A special alum tank has, therefore, now been constructed for use in future monsoons.

Filters numbers 4, 3 and 5 were found to have deteriorated. Cracks in the upper layer of fine sand were frequent. The fine sand was found to have sunk to some extent into the deeper layers as a result of the seven years of working. These filters were emptied and the materials cleaned, re-graded and re-laid. Laboratory examination of filtrate carried on when they were again put into commission showed that 16, 21 and 25 days respectively were required before they reached full efficiency.

The year's average bacterial count for the raw water was 445 total colonies (on nutrient agar) and 150·5 colonies of the typhoid group (on bile-salt agar) per cubic centimetre and for the finally chlorinated water 6·45 and 0·01 per c.c. This, as Dr. Mama states in his report "amounts to a 98·5 per cent purification. The graph maintained throughout the year for the finally treated water lies flat and close to the base line."

In addition to such routine work as mentioned above the following experimental work was done at the laboratory:—

(*a*) Determination of the percentage of purification effected *per se* by the addition of alum in the old settling tanks during the monsoon. It is to be added that settlement *per se* in the tanks (2½ days capacity) was shown by Dr. Pinto to effect 74·5 per cent. of purification in the ordinary season.

(*b*) Comparison of rapidity and efficiency of sterilization by bleaching powder and potass permanganate for drinking waters generally.

Information on special subjects of water supplies and details on laboratory technique were supplied to (1) H. E. H. The Nizam's Superintending Engineer, Hyderabad, (2) the Chief Medical Officer, Sangli State, (3) the Director of Bengal Public Health Laboratory and (4) the Health Officer, Public Health Laboratory, Delhi.

The Officer in charge paid special visits to Ahmednagar and Alandi, to advise on technical matters in connection with water supplies there.

Karachi Public Health Laboratory.—Dr. Fred Barretto, D. P. H., was in charge Public Health Laboratory, Karachi.

The output of work is less than in the sister laboratory in Poona for the reason that there was no water installation on modern lines requiring regular laboratory check at each of its stages. The laboratory will now be able to serve the new installation at Sukkur and obviate the provision of a laboratory at that place. In other respects the work of the laboratory is more varied in character than at Poona as the following history shows.

A daily bacteriological and chemical examination of the Karachi water-supply was carried out throughout the year. During the year 410 samples were examined bacteriologically and 400 chemically. Samples from various districts in Sind were also examined.

Twenty-eight samples of ghee were examined for the Karachi Municipality and 16 were found to be non-genuine, *i.e.*, 57 per cent. and of 30 samples of milk 11 were non-genuine, *i.e.*, 36·7 per cent. These results bear out what has been said above as to the necessity for the control of common foods.

With a view to arriving at the standard composition of milk of Sind cows fifteen samples of genuine milk were examined and the results may be briefly summarized as follows :—Total solids 14·006, fat 4·613 and solids non-fat 9·399. Further investigation in this connection is to be carried out and also for milk sold in Bazars to find out the extent of adulteration practised by milk vendors.

The work of the laboratory included analysis of 78 other samples of food; examination of 204 pathological specimens and examination of various miscellaneous matters (soils, shaving-brush, medicines, salt, etc.).

Two hundred and thirty-nine rats were sent for examination by the Port Health Officer. Of these 10 were found to be infected with B. Pestis. This work was carried out under difficulties (want of accommodation and other special requirements) which have now been in great part removed.

An outbreak of Ankylostomiasis amongst the sewage-farm workmen was investigated in association with the Health Officer. Eighty-three samples of Faeces were examined and ova of Ankylostomia were detected in 59. No ova were found in the sewage.

Dr. B. P. Chandanani was given accommodation and assistance in the laboratory during a two months' investigation of intestinal protozoa connected with Fevers in Sind.

A sum of Rs. 624-12-0 was the total amount of fees realized from 1st January to 31st December 1923.

Water-supplies.

107. Sukkur at the time of writing this report possesses a rapid filter plant on modern lines like that in Poona Cantonment to deal with its water-supply. The Karachi Public Health Laboratory will, it is expected, be able to serve in checking the efficiency of filtration and in prescribing dosage of coagulant and bleaching powder. Like in Poona, the question of silt is of importance in the local (Indus river) raw water. Hubli also for some years has a rapid filter plant but is without the expert

services of a laboratory and in consequence full benefit is not obtained from the installation and dosing with bleaching powder is not practised. Bombay City is actively engaged in improving its water service; regular chlorination is to be instituted and the question of filters is under consideration.

Hyderabad like Sukkur gets its supply from the Indus. The Assistant Director of Public Health writes :—

"After preliminary settlement at Gidu the water is pumped into 2 storage tanks in the city 2½ miles distant from which it is distributed by a pipe system. The water as supplied contains much sand and the better class people go in for further settlement with alum in their houses. It is apparent that the municipal purifying and clarifying process is insufficient and the municipality will need to devise a better method in the near future." In Karachi the supply is obtained from a chain of galleries in a river bed some 20 miles north-east of the city. Chlorination is practised and the Public Health Laboratory prescribes the dose, but the mechanism of dosing is of a primitive kind.

Of Sholapur, for the year under report, the Assistant Director of Public Health writes :—

"*** It was faced with a problem about its drinking water-supply. Deficient rain-fall in the previous years had drained the surplus from the Ekrukh Tank and reduced the level considerably. As the advent of the monsoon could not be gauged accurately, an all round reduction in the hours of supply had to be restored to. The timely rains in July averted what might have been a very serious situation for an industrial town. As the water was muddy, alum and bleaching powder were used from March. The existing settling tanks do not give the chemicals sufficient time to act and extension is urgently called for. The municipality are prepared to carry on a complete drainage scheme in sections and the Sanitary Engineer is helping them to do so *** ".

Treatment with bleaching powder is the practice at Trimbak and at Ahmednagar town supplies.

Fairs and Festivals.

108. The chief day of the Ashadi Fair at Pandharpur fell on 24th July 1924. Notable features at Pandharpur on this occasion were (1) a partial failure in the water-supply arrangements, (2) the large number of pilgrims and (3) an outbreak of cholera among them.

Dr. da Gama, Assistant Director of Public Health, Central Registration District, having ascertained as usual the itineraries, sent out the list of halting places, with dates, to the Surgeon General and to Collectors and Native State authorities through whose areas palkhis were to travel. Medical supervision by Dispensary Medical Officers along the routes was thereby secured.

The number of pilgrims who paid tax was 160,000, the highest on record. It is observed that as the arrangements for the comfort and safety of the

pilgrims are developed, increasing numbers attend annually. Three new palkhis appeared at this Fair.

Cholera had become prevalent in the neighbourhood of Pandharpur and in villages along the various palkhi routes for some weeks before, so an outbreak in Pandharpur was to be anticipated and general dissemination on the dispersal of the pilgrims was to be feared. Infection was carried to a number of places but in no case did a widespread epidemic ensure. An outbreak at Malegaon was quickly controlled by the local authorities acting under the advice of the Assistant Director of Public Health, Western Registration District.

One hundred and thirty-eight cases of cholera and 93 deaths occurred in Pandharpur during the first 12 days of the fair. Failure of the water-supply added to the difficulty of controlling the epidemic. The insufficiency of the water-supply arrangements and their liability to become more so under any unusual conditions is now receiving the active attention of the Sanitary Engineer's department. The distributing system also requires over-hauling and expansion.

Further powers especially in Food control to the Health Officer, a Special Medical and Sanitary Officer, to accompany each palkhi from start to finish; notification of new palkhis, temporary hospitals at Dhond and Manmad Railway Junctions like at Kurduwadi are amongst other recent recommendations of Dr. da Gama that are receiving the attention of Government (G.R., G.D., No. P.—58 of 16th May 1924).

The Kartiki Fair held in November was the next in importance. Over 91 thousand attended and about half that number attended each of the three other Pandharpur fairs. There is nothing of Public Health interest to specially record with regard to them. The aggregate tax collected for the year amounted to Rs. 91,447.

At Alandi the Chaitri and Kartiki Fairs also received the careful attention and supervision from the Assistant Director of Public Health. For the fair at Sningnapur in the end of March (attendance about 15,000) a special staff of water-men and sweepers was employed. Eleven cases of cholera occurred mostly amongst people from H. E. H. The Nizam's Dominions. The remainder of the chain of small fairs held in the Central Registration District passed off without epidemic.

The chief fairs in the Southern Registration District were attended by the Assistant Director and his Inspectors of S. and V. who supervised sterilization of water-supplies and other sanitary arrangements. Yellamma in January attended by some 15,000 pilgrims, Gokarn with about 10,000 in February and Yamnur Fair (20,000) in March are the chief fairs and there was no outbreak of epidemic.

The festivals at Vantha in Dholka Taluka and at Shukaltirth in Broach Taluka, respectively, were held from 10th to 15th November at which 10,000 and 35,000 pilgrims assembled. The services of the Inspectors of S. and V. were in each case at the disposal of the District Officers.

Lal Shahbaz Fair at Sehwan (Sind) was held from 5th to 7th April 1923. The Inspector of Sanitation and Vaccination of Larkana was on duty. The municipality engaged the services of one of the Sub-Assistant Surgeons who had worked temporarily in this Department during the fair for inspection of pilgrims. Some 22,000 attended but beyond the Medical Officer, 7 Choukidars to assist in guarding and permanganating the wells and 5 additional sweepers were the only staff engaged and only 3 kutcha latrines were provided. Arrangements in general to provide for the large influx were inadequate. Fortunately no epidemic disease appeared.

Sanitary Associations.

109. There were 9 Sanitary Associations working in the Presidency. All continue to do useful work as the following examples show :—

Karachi Association.—During the year 1923, 1,128 maternity cases were conducted by the midwives of the Association as compared with 881 in the preceding year. Of the 1,128 cases, 13 proved fatal to mothers. 5,058 house to house visits were paid by the two lady visitors, to supervise maternity cases and give advice on care and nurture of infants. 172 maternity cases conducted by "Dais" were supervised by them. A maternity home with a qualified midwife and two Ayahs under supervision of a lady visitor was opened in Bherumal Thakurdas Town Hall on 7th October 1923 for the benefit of the town people. Government have given an annual donation of Rs. 1,000 and the Municipality Rs. 3,000. 32 labour cases were conducted in the home between October and December 1923. The "Creche" or day nursery in Lyari quarter shows further increase in popularity. The attendance shows 14,035 children against 13,331 in the preceding year.

The class for training Dais in Hyderabad town started some years ago continues to progress. There were 22 Dais on the class roll during 1923. Of these 12 presented themselves for examination and 10 passed. The examination was conducted by Dr. Balfour, W. M. S. Miss Piggot writes that one of the municipalities in the district asked for and was given the services of a trained midwife from the class. She also reports similar requests from other municipalities but their request could not be complied with as the Dais were not willing to leave their home. She has, therefore, opened a class of 2 Dais in another town in the centre of Hyderabad District.

Miss Piggot wants trained Dais to be registered by the Hyderabad Municipality so that they may receive recognition by the public.

Broach Sanitary Association has a long list of useful work on record for the year. Two public lectures were delivered in the city and five in the Taluka towns in the district. Three Health Shows were organised. Illustrated charts and posters on different sanitary subjects were exhibited and explained to the people. These shows were held in the District also, one at the annual fair at Shukaltirth and the other at the time of the Political Conference at Amod. Other work by this Association included

First Aid classes, distribution, free and at a small price, of quininodine publication and free distribution of pamphlets in Guzerathi "Home Hygiene", "Ordinary Rules of Health", etc., 23 lectures in Broach Town and district on a well selected variety of health subjects, *e.g.*, maternity, tuberculosis, flies, etc. In schools practical demonstrations on care of teeth, etc., were given. A Baby Week with Baby show, Health Exhibition, magic lantern with a leavening of amusing side-shows, was held in November organised by the leading ladies and gentlemen, lay and medical, of the town.

Ahmedabad Sanitary Association secured the services of Dr. Chimanlal M. Parikh, M.B., B.S., as its Health Visitor throughout the year. Complaints from the public about general insanitation were forwarded to the municipality at the same time that the efforts were made to instruct the public in the necessity for individual co-operation in such matters. Illustrated lectures were given in schools. Home medical relief was given to the poor and a Health Exhibition on a large scale got up by Government servants and others of various shades of opinion was much appreciated by the public and a very successful Sanitary Conference was held later in the year.

Lantern shows, etc., were held at different times in the city and surrounding places.

Belgaum Sanitary Association held in stock a large quantity of quinine and sold it at cost price. It also distributed quinine free of cost in malarial tracts of Belgaum Taluka and in parts of Murgod Mahal. Dharwar Sanitary Association distributed quinine and under its auspices 3 lantern lectures were given by the Assistant Director of Public Health and officers of the Educational Department. The Association has now merged into the Dharwar Red-Cross Association.

Surat, Viramgaon, Poona and other Sanitary Associations also did very useful work towards educating the public in Health matters.

The Bombay Sanitary Association has been registered under Act XXI of 1860 (Government of India) in 1921, the list of members at present comprising 3 patrons, 39 Life Members and 49 ordinary members. There is one Health Visitor whose duties are to visit daily, morning and evening, insanitary localities and chawls, to instruct the people in the prevention of any diseases prevalent in the City and to explain the simple measures that can be adopted for securing sanitary conditions in their homes. 3,052 houses were visited, 277 patients were sent to the Municipal Dispensaries for treatment and that 211 houses were represented to the Health Department for the remedy of sanitary defects by municipal Agencies. The Elementary Sanitary Classes, two evenings a week in the rooms of the Association, Princess Street, have been continued, and a nominal fee of Rs. 5 being charged for the course, examination and certificate. Fifty-three students attended classes, 19 appeared for the examination and 14 received the certificate issued by the Association. During the Ashadi Fair at Pandharpur in July 1923, lectures on behalf of the Association were organised with magic lantern demonstrations on

Plague, Cholera and Malaria. The causes of the spread of these diseases were explained to the pilgrims by means of magic lantern slides and a number of leaflets bearing on different subjects relating to sanitation and hygiene were distributed. The demand for the books of leaflets and for the posters of the Association was maintained. As for financial help, the Municipal Corporation continued their annual donation of Rs. 1,500 towards the funds of the Association. Public subscriptions in 1923-24 amounted to Rs. 1,020 and Government adds an equal sum.

Health Week.

110. The object of Health Week is to focus public attention for one week in the year on matters of Health, and to arouse that sense of personal responsibility for Health without which all public work must fall far short of its aims.

Health Week came off in Ahmedabad from 7th to 13th October 1923. The Assistant Director of Public Health, Guzerat Registration District, took active part in the movement; was one of the members of the Organizing Committee, delivered a lecture on Infant Mortality and Child Welfare and lent all the available literature, posters, cartoons, etc. The "Health Week" was a complete success. During the Week, an exhibition was held in the city under the auspices of the Ahmedabad Sanitary Association and was a complete success.

Health Week was also celebrated in Karachi. A strong committee was formed of representatives from local Institutions engaged in various branches of Social service. Funds were contributed by the City Municipality and the local Health Association, Red Cross Society, St. John Ambulance and by private donars. Honorary lecturers were engaged; a large collection of sanitary appliances, pictures of sanitary interest, etc., was exhibited. Cinema shows, lectures in schools and sermons in churches formed part of the extensive programme. A Physical Culture exhibition and an athletic tournament for all Sind were run at the same time. Mr. N. D. Mallik, a well known merchant of Karachi was energetic as Honorary Secretary and helped to make the Week a success starting with the ceremony of opening a Maternity Home belonging to the Karachi Health Association and ending with house to house visits by lady visitors. A strong committee is now formed to make the Week an annual event and in the hope of sustaining the interest aroused in Health matters.

Bombay Development Directorate.

111. During the year under report, all the Directorate's Labour Camps were visited by Dr. Munsiff, A.D.P.H., of the Western Registration District and in consultation with the Deputy Director of Development adequate arrangements for each camp were made for the proper registration of births and deaths, early notification of epidemic diseases, vaccination, conservancy, water and food supply and medical attendance for the labourers. In order to keep a check on the prevalence of disease

(particularly epidemic) it has been arranged that coolies not directly employed by the Directorate should also be treated free at the dispensaries. This keeps Medical Officers of labour camps in touch with all cases of sickness and in a position to report and take action promptly on the first appearance of any epidemic disease.

Subsequent inspections showed that these measures were effective as judged by improvement in the general health, and absence of epidemic diseases. At Kandivli Quarry Colony, a spleen register and regular treatment (both prophylactic and curative) with quinine resulted in markedly lowering the incidence of malaria. Throughout the cold weather all the camps remained free from epidemic diseases, despite a high incidence all over the Division.

In Salsette, instances were noted of factories and workmen's dwellings erected in undesirable or unhealthy surroundings. Some of the former proved a nuisance and some of the latter had to be abandoned. From the owners' (economical) point of view as well as in the interests of Public Health, it has now been decided by Government that local authorities should consult the Public Health Department with regard to future proposed sites.

The much needed appointment of a District Health Officer for the Salsette area is still under postponement for want of funds.

Industrial Workers.

112. In their capacity as Medical Inspectors under the Indian Factory Act, 1911, the Assistant Directors continued their inspections begun in 1922 in the course of their touring. They submitted copies of their reports to the Managers of the factories and the Chief Inspector of Factories, Bombay. An appreciation of their work appears on page 6 of the Annual Factory Report (1923).

Twenty-two mills and factories were visited in the Bombay Suburban, Thana and Kolaba Districts. In general the larger ones showed adequate arrangements to preserve the health of the workers while owners of smaller concerns give little consideration to those points. The "Sholapur Mills" new and old and the Narsing Girji mill showed defects in sanitary arrangements and one of the mills at Sholapur was found to have a very defective septic tank and unsatisfactory sanitary accommodation. The advice of the Assistant Director including a new design for a septic tank and rearrangement of latrines was willingly and readily adopted by the Manager. After discussing matters fully, the Manager of one of the other mills realized the advantages and ultimate economy in installing accommodation and a disposal plant on modern lines. Plans were drawn up and the Assistant Director further assisted him in the matter of selecting sites, etc. It may be mentioned that two creches and a maternity home give very useful health service in connection with the Sholapur Mills.

In the southern Registration District a careful and systematic inspection of 46 factories was carried out by previous arrangement with the managers

or other officials. Defects in respect of water-supply, latrine arrangements, ventilation, smoke-nuisance, etc., were indicated and the advice tendered was appreciated and in many cases acted upon. The Assistant Director of Public Health (Dr. Dalal) states :

"(1) It is eminently desirable to commence the recording of health statistics of factory hands and to keep registers with the assistance of their own Medical Officers or by Medical Officers of the local dispensaries. (2) The postcard system of notifying chief epidemic diseases should be introduced in all factories. (3) Records as to weight, height and age of each worker should be kept. (4) Every worker in a factory should be given an annual fortnight's holiday on full pay for visiting his home. This is in the interest of both the worker and the factory owner."

Thirteen factories were inspected in Ahmedabad and Surat and arrangements were found on the whole satisfactory. Outside the two towns named the water-supply of mills is taken from wells on the premises and these were most often insanitary.

In Guzerat ginning-mills as a rule no latrine accommodation of any kind is provided and the artificial lighting in those that go in for night work was considered insufficient and dangerous. None of the Guzerat factories have medical, ambulance or health welfare arrangements. The Assistant Director of Public Health suggests that even the smallest should have a First Aid outfit and that the more regular employees should be encouraged to learn First Aid work. A paper by that officer was sent to the All-India Industrial Welfare Conference in April.

The Assistant Director of Public Health, Sind, inspected 13 factories during the year and reports as follows :—

"The two Railway Workshops at Sukkur employing nearly 2,000 workmen were found in a fairly satisfactory condition in comparison to others in Sukkur. They were found to be especially insanitary in regard to storage of drinking water and accommodation for some 959 workmen to take their mid-day meal. The shed provided was in a filthy condition. The latrine accommodation also was insufficient.

"Of other industries the conditions in the wool-pressing and rice factories were very objectionable in the interests of the health of their workmen besides being productive of avoidable nuisance in their locality. They are badly in need of regulation. In Garhi Yasin there are about one hundred such rice factories combined usually with other work; such as cotton ginning, grass or wool-pressing, etc., and they were found to be especially insanitary. Water that is practically town sullage is used in preference to available well water in the processes, for no other reason apparent than economy. Latrine accommodation and general cleanliness were conspicuously absent."

PERSONAL PROCEEDINGS.

113. The activities of the Officers in charge of the Public Health Laboratories are detailed above (Laboratories).

The Assistant Directors of Public Health visited 714 towns and villages during the year making reports to the local authorities as they found called for. Dispensaries, Schools, Police Lines, Factories, proposed sites for Government buildings, etc., in their lines of tour were inspected.

During the off-touring season the prescribed courses of lectures in public health to medical students were delivered at the Medical Schools, Poona, Ahmedabad and Hyderabad (Sind), by the Assistant Directors.

Dr. Jamshyd Munsiff was in charge of the office of the Western Registration District throughout the year. He gave advice in public health matters in two towns and visited 18 towns for general sanitary purposes and 183 villages for vaccination. The Inspectors of Sanitation and Vaccination made remarks in 29 Village Sanitary Inspection Books.

Guzerat Registration District was in charge of Dr. R. V. Shiveshwarkar from 1st January to 7th April 1923 and from 8th April to the end of the year by Dr. J. L. Pinto. Advice was rendered on public health matters in the case of 26 towns and 16 were visited for general sanitary purposes and 106 villages for vaccination. Remarks were entered in 14 Village Inspection Books, while the Inspectors of Sanitation and Vaccination wrote in 82.

Dr. R. D. Dalal held charge in the Southern Registration District throughout the year besides additional charge of the Vaccine Institute, Belgaum, after the death of Dr. Fisher on 26th October. He gave advice in public health matters in 9 towns and visited 61 towns and villages for general sanitary purposes and 91 for vaccination. The Inspectors made remarks in 54 Village Sanitary Inspection Books. He also gave lectures on village sanitation and personal hygiene to the Patels in the Belgaum, Dharwar and Bijapur districts by arrangement with the Collectors.

Dr. J. L. Pinto was in charge of the Central Registration District up to 2nd April 1923 when Dr. A. da Gama returned from leave. Thirty-one towns were visited for general sanitary purposes, 33 for vaccination and a detailed report was rendered for four towns. Inspectors of Sanitation and Vaccination made remarks in 40 Village Sanitary Inspection Books.

Dr. da Gama attended the fairs at Pandharpur, Alandi, Shirala, Chinchwad and inspected Palkhis at eight of their halting places in Poona and Sholapur districts. During the cholera season, he visited various epidemic centres.

In Sind Lieut.-Col. H. M. H. Melhuish, D.S.O., I.M.S., was in charge as Assistant Director up to 23rd March. Dr. Shiveshwarkar took over on 16th April, Dr. Barretto having acted in addition to his own

duties in the interval. Advice was given in the case of 22 towns and 5 other towns were visited for general sanitary purposes and 120 villages in connection with vaccination.

The office of the Director of Public Health for the Government of Bombay was held by Lieut.-Col. W. O'S. Murphy, I.M.S., up to 30th March 1923 when Lieut.- Colonel Melhuish, D.S.O., I.M.S., took over. During the year 17 towns were visited in connection with their water-supplies, drainage and for general sanitary purposes. The Yellamma Fair in January, Ashadi at Pandharpur and the Kartiki (November) Fair at Alandi were attended.

W. O'S. MURPHY, D.P.H.,
Lieut.-Colonel, I.M.S.,
Director of Public Health.

Poona, 2nd August 1924.

APPENDIX I.

ANNUAL REPORT OF THE SANITARY BOARD, BOMBAY PRESIDENCY, FOR THE YEAR ENDING DECEMBER 31ST, 1923.

During the year under report there was no change in the constitution of the Board.

2. Three meetings of the Board were held, the following being the more important of the subjects dealt with :—

(1) Recognition of the Indian Diploma in Public Health in connection with the appointment of Health Officers of First Class Municipalities.

(2) The recommending of total exemption from establishment, tools and plant charges in the case of projects for local bodies, when a considerable portion of the cost has been raised by local contributions.

(3) The functions and constitution of the Sanitary Board.

The fair scheme for Vita water supply was forwarded to Government with a recommendation for a grant-in-aid of 50 per cent. of the cost.

The scheme for the water supply of nine Kharapat villages near Uran was approved, subject to satisfactory proposals being received with respect to provision of the working expenses.

3. The preparation of plans and estimates in detail was sanctioned for the following projects :—

(1) Gokak water supply.

(2) Poona city water supply—Katraj supply.

4. Owing to financial stringency no funds were placed at the disposal of the Sanitary Board for the distribution of grants for minor sanitary schemes.

WATER SUPPLIES.

5. The progress made in connection with the more important works for the supply of water in the Presidency was as follows :—

Sukkur.—The following items of work were under construction :—

(1) Precipitation tanks.

(2) Rapid filtration plant.

(3) Engine house, pumping sump and pure water tank.

(4) Erection of high and low lift pumping machinery.

(5) Chowkidar's quarters.

(6) 15 inch rising main.

These works, designed to give a daily supply of 720,000 gallons in eight hours, were carried out by Government agency and with the financial assistance of Government.

The estimated total cost of the project is approximately 6 lakhs. The net expenditure during the year was approximately 2½ lakhs.

Hyderabad.—The works in progress for the improvement of the water supply, including new pumping plant at the Gidu Intake works and at the Fort Lift Pumping Station were practically brought to completion; these works were carried out by Government agency and with financial assistance from Government.

The estimated total cost of these improvements is about Rs. 5,60,000 and the year's expenditure was approximately Rs. 90,000.

Karachi.—Excavation for the new Malir Conduit was in progress over a length of nine miles and the work of laying the foundation concrete and walls of the new conduit was commenced; the expenditure on this work during the year amounted to approximately Rs. 1,90,000.

New water mains were laid for Clifton, the Khudda Quarter, Ranchore Lines, and the Garden and Frere Town Quarters. New electrically driven centrifugal pumps were installed for the high level tank in the old town. The expenditure on these improvements to the distribution system during the year amounted to about Rs. 4,00,000.

These works were carried out by the Municipality without Government aid.

Ahmedabad.—Water mains and distributaries of 6″, 4″, 3″ and 2″ diameter of a total length of about 8,600 feet were laid in outlying areas of the city where improvements had become imperative at a cost of approximately Rs. 25,000.

This work was done without Government aid.

The proposals of the Municipality for the improvement of the whole of the water supply works at a cost of approximately Rs. 28 lakhs were under consideration by the Sanitary Engineer.

Surat—Warachha intake works.—On the advice of the Sanitary Engineer an additional (low level) pipe of 24 inches diameter was laid between the infiltration wells and a new jack well near the Pumping Station, the new jack well being connected with the adjoining old well. Repairs to infiltration well No. 2, 12 feet in diameter, were carried out and a complete overhaul of the boilers and the two old engines was in progress. A workshop was opened fitted with a Dynamo for lighting purpose. The total cost of these improvements, which were financed by the Municipality and carried out by Municipal agency, amounted to approximately Rs. 70,000.

Nasik—Distillery water supply.—The following works in connection with the Nasik Distillery water supply were executed by the Sanitary Engineer at a total cost of approximately Rs. 61,500 :—

(1) Cleaning the intake roughing filters and well at Chehedi.

(2) Additions and alterations to pump house at the intake at Chehedi.

(3) Duplicating 6 inch C. I. pumping main 10,300 feet in length between the intake works and the filtration plant.

A new vertical electrically driven centrifugal pump was added at the Chehedi Pumping Station at an approximate cost of Rs. 5,000.

Matheran.—A new sluice was provided at the outlet from the Charlotte Lake dam, the work costing approximately Rs. 5,000, being financed by the Municipality and executed by the Sanitary Engineer.

Poona—Cantonment water works.—For the improvement of the supply to Yeravda and the Koregaon Road Estate, the laying of a new 9 inch main 18,500 feet long connecting with the High Service Reservoir, with a reinforced-concrete elevated balancing tank of 100,000 gallons capacity at Yeravda, was in progress. The distribution mains on the new Koregaon Road area and the two additional rapid-filter units commenced in 1922 were completed.

These works were financed by Government and carried out by the Sanitary Engineer, the expenditure on them during the year amounting to approximately Rs. 27,600.

These water works, which supply the Cantonment and Suburban Municipal areas, are maintained and run by Government; the average daily quantity of filtered and chlorinated water supplied during the year was approximately 2¼ million gallons, the average doses of alum and chlorine being ½ grain per gallon and 0·35 parts per million respectively.

Poona City water supply.—The byepass channel at the Swar Gate settling tanks was completed and brought into use, with considerable resulting economy in the chlorination of the city supply and in the loss of water by leakage.

A new alum tank was provided and a pipe connection made between the two tanks for better circulation during the monsoon.

A 24" Venturi Meter with recorder house was installed at the head of the low level supply mains.

The expenditure on these works during the year which was partly financed by Government amounted to approximately Rs. 8,500; these improvements were carried out by the Sanitary Engineer.

Ahmednagar.—The erection of a pump house and pumping plant for the utilisation of the percolation water from the Pimpalgaon tank dam and the laying of 2,000 feet of 15 inch pipe to connect with the gravitation main were completed. This work which forms part of the Pimpalgaon project, the total cost of which amounts to about 18½ lakhs, was executed by Government agency and with financial assistance from Government.

Pandharpur.—Additions to the existing works had become necessary owing to the increased demand for water during the fairs, particularly during the Ashadi Fair. The improvements undertaken up to the present are an infiltration gallery in river Bhima to increase the supply afforded by the three existing infiltration wells and an additional service reservoir, to contain 600,000 gallons, adjoining the existing reservoir. Work on the storage reservoir was commenced in November, three-fourths of the excavation work being

completed by the end of the year. For the infiltration gallery a few experimental lengths of porous cement-concrete pipes of 24" internal diameter were moulded and tested. These tests gave satisfactory results and preparations were made for forming the infiltration gallery of a 240 feet length of these porous pipes, at an anticipated considerable saving as compared with the usual type of gallery. The estimated cost of these improvements, which are being financed by Government and carried out by the Sanitary Engineer amounts to Rs. 85,000.

The work of overhauling and repairing the boilers and pumping engines was being carried out under the supervision of the Mechanical Engineer to Government.

Sholapur.—Water mains and distributaries, 12", 9", 6", 4" and 3" in diameter were laid from the new service reservoir to Baramati Naka of a total length of 10,884 feet; this work was carried out by the local body without Government aid, the expenditure during the year being Rs. 52,400.

Belgaum-Hindalgi Jail water supply.—The laying of the 4" rising main and distribution pipes and the construction of the service reservoir were completed, and the following additional works constructed: An infiltration gallery parallel to and adjoining the River Markandaya, a jack well 20 feet in diameter, a pumping station with 10-B. H. P. oil engines and three-throw pumps in duplicate.

A supply was given to the Jail from September, 1923.

These works were carried out by the Sanitary Engineer, the expenditure during the year being approximately Rs. 29,700.

BORING WORKS.

6. The progress of boring operations in the Presidency carried out by the Sanitary Engineer's staff was as under:—

Aden.—Arrangements for erecting a boring machine at Sheikh Othman and for putting down a 10" bore for the improvement of the Aden water supply were in progress.

Karachi.—The 10" bore at Drigh Road commenced in 1922 was continued from 65 feet to a depth of 117 feet when it was found impossible to drive further owing to the presence of boulders; a fresh bore was started and reached a depth of 412 feet by the end of the year without striking good water within that depth.

Karachi-Malir bridge.—Of the three experimental 3½" bores in connection with the N. W. Railway workshops water supply, the first boring was continued from 51 feet to 70 feet, and the second and third put down to depths of 110 feet and 26 feet respectively. A sufficient supply of water was assured from bore No. 2, rising up to 18 feet below ground level.

Karachi-Farm well.—A 3½" bore was put down in this well to a depth of 287 feet, and an additional supply of about 7,000 gallons per day thus procured.

Detroj (Ahmedabad District).—An 8" bore was started in June, taken to a depth of 637 feet by November and continued as a 6" bore

to a depth of 651 feet where a 60 gallons per minute flow of sweet and potable water was met with. This boring has resulted in the provision of a daily supply of about 85,000 gallons per day which is amply sufficient for the needs of the village.

Dhanduka (*Ahmedabad District*).—A 9″ bore was started in September and taken to a depth of 291 feet when rock was met with, the work was continued by a rotary tool and had reached a depth of 413 feet by the end of the year without striking water upto that point.

Sanand (*Ahmedabad District*).—The 9″ bore in progress last year was continued from 755 to 801 feet at which depth a supply of sweet water amounting to approximately 50,000 gallons per day was tapped, affording a daily supply of about 7 gallons per head for the population of 7,000.

Sitapur (*Ahmedabad District*).—Erection of a 7″ plant was commenced here towards the end of the year.

Tajpur (*Ahmedabad District*).—An 8″ bore was started in April and by September had reached a depth of 709 feet at which point it was found necessary to reduce the size to 6″. The bore was continued of this diameter to a depth of 790 feet where a flow of about 85,000 gallons per day was encountered, sufficient to provide an ample supply for this village.

Chanchiwel (*Broach District*).—A 10″ bore was started in February and taken to a depth of 379 feet by June; the strata met at this point proving very hard, the size of the bore was reduced to 7″ and continued, after a stoppage of five months on account of the flooded state of the country, to a depth of 501 feet by the end of the year without striking good water within that depth.

Dharasna (*Surat District*).—The 3½″ boring at the Dharasna Salt works was continued from 48 feet to 210 feet at which depth work was stopped without finding sweet water.

Nandurbar (*West Khandesh District*).—Seven shallow borings of 3½″ diameter were put down in some of the town wells in the hope of augmenting the water supply; four of these bores resulted in small increases to the well supplies.

Miraj (*Southern Maratha Agency*).—A 5½″ bore was sunk in a well in the American Mission compound to a depth of 187 feet and continued as a 3½″ bore through trap rock to a depth of 400 feet without finding water. A second 5½″ boring was put down in another well to a depth of 225 feet and continued as a 4½″ bore to a depth of 378 feet when a small flow of water was tapped.

Sutgatti (*Belgaum District*).—A 3½″ bore was put down in the well of the Sutgatti bungalow to a depth of 50 feet without tapping water.

Drainage.

7. The principal items of progress in connection with drainage works were as under:—

Karachi.—Sections of the rising mains in the Civil Lines and the Frere Town Quarters was lowered. An additional unit

consisting of an oil engine and a Reavell air compressor for the Civil Lines drainage was erected and put to work. The 21″ C.I. rising main in Napier Road was replaced by a 24″ C.I. main. A new 7″ sewer was laid in the Frere Town Quarter. These works costing in all about Rs. 94,000 were carried out by the Municipality without Government aid.

Ahmedabad.—8″ and 6″ diameter branch sewers were laid in different localities to a total length of 4,300 feet at an expenditure of about Rs. 40,000; this work was done without Government aid. The Municipal proposals for the extension of the sewerage system at a cost of approximately Rs. 52 lakhs were under consideration by the Sanitary Engineer.

Nasik Distillery sewage and waste water disposal works.—Works for the disposal of (*a*) the spent wash and (*b*) the combined sewage and wash-water were constructed during the year by the Sanitary Engineer at a cost of approximately Rs. 98,500. The spent wash works consisted of an open masonry channel 1,400 feet long through the Distillery compound, a crossing under the railway and earthen channels with stoneware pipe inverts about 11,000 feet long, with masonry storage tanks, about 14,500 feet of branch distributary channels and 58 acres of trenching ground with 800 shallow trenches. The sewage and wash-water works consisted of about 1,840 feet of masonry channels, a railway crossing and 4,460 feet of earthen irrigation channel with the necessay chambers, road crossings, etc.

Poona City.—3,800 feet of branch sewers and laterals were laid in Poona City and 220 new house connections given; this work being executed by the Municipal agency, under the direction of the Sanitary Engineer, at an approximate cost of Rs. 18,700. A new experimental pumping plant was ordered by Government for the Central Sewage Pumping Station. The comprehensive project for the sewerage and sewage disposal of the City, Cantonment, Suburban Municipality and Railway Areas is awaiting Government sanction.

Alandi.—A 6″ stoneware pipe drain was laid by the Sanitary Engineer from the urinals near the Dnyaneshwar temple to the Pundlik's temple where it joins the Bhagirathi Nala drain, at an approximate cost of Rs. 2,800.

Sholapur.—The combined drainage works for the King Edward Memorial Hospital and the Police Lines was completed; these works were carried out by Government agency, at a total cost of approximate Rs. 60,000, the expenditure during the year being Rs. 5,250.

Belgaum-Hindalgi Jail drainage.—A water carriage sewerage system with water closets and water flushed urinal was in progress; 6,600 feet of 4″ pipe sewer, 1,930 feet of 6″ pipe sewers, 80 manholes and inspection chambers, and two settling tanks were constructed during the year; the effluent from the tanks will be used for the irrigation of the area to be acquired for the Jail Garden. These works were carried out by the Sanitary Engineer, the expenditure on them during the year being approximately Rs. 59,000.

Baramati.—V shaped surface drains were under construction by the Municipality (with the help of the Sanitary Engineer's advice) in different parts of the town for the removal of sullage and storm water, the work being financed by the local body.

MISCELLANEOUS WORKS.

8. *Destruction of Water Hyacinth.*—The Mutha-Mula River at Poona and the Kopneshwar Tank at Thana were freed from this pest during the year.

Yield tests.—A yield test was taken of the Mughal well in Ahmedabad Cantonment.

9. In addition to schemes actually under execution the Sanitary Engineer was engaged during the year on survey or project work in connection with the following projects (the project work being restricted to work of a preliminary nature until satisfactory proposals are put forward with regard to finance) :—

District.	Name of scheme.
Sukkur ...	Garhi-Yasin Drainage.
Thar and Parkar	Mirpurkhas Drainage.
Ahmedabad ...	Ahmedabad City Moat Drainage, Ahmedabad Cantonment Water Supply, Sabarmati Jail Water Supply Improvements, Viramgaum Storm Water Drainage, Bavla Water Supply.
Kaira ...	Kapadwanj Water Supply, Kaira Police Lines Water Supply, Sarsa Water Supply, Borsad Water Supply, Umreth Water Supply.
Panch Mahals .	Dohad Water Supply.
Broach ...	Ankleshwar Water Supply.
Surat ...	Surat Water Supply Improvements.
West Khandesh.	Bhusawal Drainage, Dhulia Drainage, Dhulia Water Supply Improvements.
East Khandesh.	Jalgaon Water Supply, Pachora Water Supply.
Nasik ...	Yeola Water Supply, Manmad Drainage.
Thana ...	Matheran Water Supply, Bhyander Water Supply.
Kolaba ...	Uran Water Supply.
Poona ...	Alandi Water Supply, Dehu Water Supply, Junnar Water Supply, Baramati Drainage.
Satara ...	Panchgani Water Supply, Satara Water Supply, Karad Water Supply, Islampur Water Supply.
Sholapur ...	Sholapur Drainage, Sholapur Sadar Bazar Nala Drainage, Barsi Drainage, Sholapur Water Supply Improvements.
Bijapur ...	Bijapur Drainage, Bijapur Water Supply Improvements.
Belgaum ...	Gokak Water Supply, Saundatti Yellamma Water Supply, Belgaum Water Supply.
Dharwar ...	Dharwar Police Lines Drainage and Water Supply, Dharwar Water Supply, Nargund Water Supply, Gudguddapur Water Supply.

10. A marked feature of the year under review is the growth of the realisation of local bodies all over the Presidency of their responsibilities in connection with works of public health and sanitary improvement and of their readiness to finance or partly finance the same.

This increasing readiness to take up in earnest such works is probably partly due to the policy recently introduced of presenting to the local bodies concerned projects which can be carried out in gradual stages while affording immediate improvement to some portion of the areas.

Until quite recently comparatively few local bodies came forward with definite proposals for financing projects of water supply or drainage to the extent of even 50 per cent. of the total cost, but at the present time there is a marked readiness on the part of quite a considerable number of Municipalities to undertake schemes provided they can obtain grants-in-aid of 50 per cent. from Government, while a few local bodies have already showed their readiness to find the whole cost of urgently needed sanitary improvements. As will be seen from the preceding paragraph of this report, several of the large Municipalities have expended considerable sums from their own funds on Public Health Improvements, the year's expenditure on such works by Karachi, Ahmedabad and Surat alone amounting to about 8¼ lakhs.

The Municipalites of Jacobabad, Shikarpur, Larkana, Kapadwanj, Godhra, Matheran, Poona, Mhaswad, Islampur, Nipani, Vita and Gokak, among others, have shown their readiness to finance considerable public health projects to the extent of 50 per cent. and have put forward definite financial proposals for the purpose. Unfortunately owing to financial stringency the funds available with Government for the purpose do not permit of more than a small number of these local bodies being assisted at one time, and the rigidity of the budget provision and the Sanitary Board's lack of power of reappropriation of a grant from one project to another unfortunately result (in the event of unforeseen delay in connection with a project for which funds have been allotted by Government) in an unnecessary slowing down of the rate of Sanitary progress.

The recent reorganization of the Sanitary Engineers Division, with six small sub-divisional offices distributed over the Presidency, has helped to bring the smaller local bodies into closer touch with the Sanitary Engineer and has resulted in a considerable increase in the number of requests for advice and assistance and in the rapid growth of the usefulness of the Division to the Municipalities and Local Boards.

11. During the year under report the Sanitary Engineer visited the following places to give advice to the local bodies or to inspect works in progress :—

Jacobabad, Garhi-Yasin, Shikarpur, Sukkur, Mirpurkhas, Hyderabad, Karachi, Kapadwanj, Surat, Dhulia, Pachora, Jalgaon, Paldhi, Nasik, Trimbak, Bhyandar, Matheran, Lonavla, Alandi, Dehu, Pandharpur, Barsi, Sholapur, Bijapur, Belgaum, Dharwar and Gadag.

12. The post of Sanitary Engineer to Government was held from January 1st to May 19th and from October 19th to December 31st by Mr. A. P. Maddocks, B.Sc., M.Inst.C.E., and during his absence on leave from May to October by Mr. P. N. Nateshaiyer, L.C.E. The Project Office was in the charge of Mr. P. N. Nateshaiyer, L.C.E., until he went on leave on October 19th, when he was relieved by Mr. J. F. Lobo, L.C.E.; the Poona Water Works and the Poona Drainage Construction districts were in the charge of Mr. R. A. Collett, A.M.I.C.E., and of Mr. V. G. Shete, L.C.E., A.M.I.E. (Ind.), respectively; and Mr. W. C. Dooris was Executive Engineer in charge of Boring Works.

Mr. G. H. Thiselton-Dyer, M.A., M.Inst.C.E., resumed the appointment of Mechanical Engineer to Government on March 1st and took up again the inspection of Municipal pumping plants.

A. P. MADDOCKS,

B.Sc., M.Inst.C.E., M.Inst.W.E., F.R.San.I.,

Secretary, Sanitary Board,

Bombay Presidency.

APPENDIX II (*a*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31st DECEMBER 1923.

I.—Summary.

The following summary shows the inspection and disinfection work done in the Port of Bombay in connection with out-going and in-coming vessels as well as those lying in the harbour and docks during the year ending 31st December 1923.

Seven hundred and ninety-four vessels of all classes with 178,764 crew and passengers were examined during the year. The number of troops examined by the Military Medical Embarkation Staff is not included amongst passengers.

The clothing and bedding and other articles of 83,239 members of crews and passengers of out-going and in-coming vessels and of members of crews of vessels lying in the port were disinfected. Of these 53,872 were Asiatic and African members of crews, third class or deck European and Indian passengers, 17,113 were pilgrims who left the Port of Bombay for ports out of India, and 12,254 were members of crews and passengers who arrived by vessels on which cases of infectious diseases had occurred during the voyage or while in the port. In addition to the above-mentioned numbers, 2,548 baggage coolies and some stevedores men were disinfected in order to enable certain vessels to work cargo for a few hours after medical inspection and disinfection of their crews and passengers.

Forty-two vessels on which cases of infectious diseases occurred were disinfected. Out of the 19 vessels which carried pilgrims to Jeddah 17 were thoroughly cleansed and freed from rats by means of sulphur dioxide gas generated in the Port Clayton Apparatus. The remaining two pilgrim ships were fumigated by their own Clayton machines which were provided on board the vessels. Besides the 19 out-going pilgrim ships, 3 other vessels were fumigated. In addition to this number, 29 vessels were fumigated by the British India Steam Navigation Company's apparatus. Two hundred and twenty-two persons who had been in contact with small-pox were vaccinated. In addition to this number, 13,194 out-going pilgrims were vaccinated and 5,965 were inoculated by anti-cholera vaccine by special vaccinating and inoculating Staffs lent by the Municipality, under the direction of the Police Commissioner.

II.—Out-going Vessels.

2. In accordance with Government Notification, General Department, No. 1713, dated the 15th March 1917, the medical examination of all vessels, crews and passengers, proceeding to ports out of India, and the disinfection of the clothing and bedding of all Asiatic and African members of crews, of all passengers travelling third class who were not provided with cabin accommodation, of fourth class and deck passengers and of all Asiatic and African servants who sailed on such vessels, were carried out before they left the Port of Bombay.

3. Six hundred and forty-five outward bound vessels with 75,439 crew and 58,984 passengers, or a total of 134,423 persons

exclusive of troops who were examined by the Military Embarkation Staff, were inspected as against 785 vessels with 81,538 crew, and 53,188 passengers or a total of 134,726 persons, during the preceding year.

4. The bedding, boxes and suspected articles of clothing, etc., of 37,887 Asiatic and African members of crews, of 15,985 third class, fourth class and deck passengers and of 17,113 pilgrims who sailed on steamers bound for ports out of India, were disinfected.

5. In certain cases the Asiatic and African members of crews of vessels which merely called at Bombay to land mails and passengers and which sailed on the same day for a Port out of India, were exempted from the disinfection of their clothing and bedding.

6. Six vessels had cases of small-pox, cholera, and chicken-pox, among their crews and passengers within 12 days prior to their departure from this port. The Bills of Health granted to these vessels mentioned the diseases which had occurred on board, as well as the measures which had been taken before their departure for the prevention of the spread of infection on board or its introduction at other ports.

7. The surgical and medical equipment of 9 vessels was inspected during the year, in accordance with Rule 11 (1)*c* of the Native Passenger Ships Act X of 1887 as amended by the Government of India Notification No. 264-44*c*, dated Delhi, 15th January 1916.

III.—In-coming Vessels.

8. In accordance with the rules prescribed under Government Notification, No. 1713, dated the 15th March 1917, medical Inspection and disinfection of vessels which were actually infected or suspected of being infected were carried out. All Pilgrim-ships, and all vessels which arrived from East African Ports were also inspected on arrival.

9. One hundred and thirty-six in-coming vessels of various kinds, with crews aggregating 14,861 persons and 28,821 passengers and pilgrims, were inspected during the year. Of these 136 vessels 29 (including Hired Transports) were found to have had cases of infectious diseases on board at the time of arrival or during the voyage. In connection with these vessels there were 2 cases of plague, 6 cases of cholera, 8 cases of small-pox, 12 cases of measles, 12 cases of chicken-pox, 6 cases of jigger, 32 cases of influenza and 6 cases of pneumonia. The cases of influenza occurred among the members of crews, passengers and troops on one vessel, the hired transport "Derbyshire". The cases which occurred on Hired Transports were dealt with by the Military Authorities on landing in Bombay, and those among the crews and passengers of other vessels by the Port Health Officer. The cases enumerated above, as having occurred among the troops were removed to the Military Hospitals on shore for treatment, while those detected among the European Crews were removed to St. George's Hospital and those among the Asiatic and African members of crews to the Jamsetjee

Jeejeebhoy, Gokuldas Tejpal, Arthur Road and Maratha Hospitals. The ships and the clothing and bedding of their crews were disinfected. Fifteen vessels with 10,858 pilgrims arrived from Jeddah. Four of these vessels had four cases of small-pox, and one case of measles on arrival in Bombay.

IV.—Infectious diseases on vessels arriving and departing and in the harbour and docks.

10. Tabular statement No. 1 gives the number of cases of infectious diseases which occurred on vessels arriving at or departing from the Port of Bombay or lying in the harbour or docks.

It will be seen that 84 cases occurred on in-coming vessels as follows :— Two cases of plague, 6 cases of cholera, 8 cases of small-pox, 12 cases of measles, 12 cases of chicken-pox, 6 cases of jigger, 32 cases of influenza and 6 cases of pneumonia. Three cases of chicken-pox were detected at the time of the disinfection of the crews of out-going vessels. Seven cases of and 1 death from small-pox and one case of measles were reported to have occurred on vessels after their departure from this port and these cases were landed at Karachi, Aden, Seychelles and Mombassa.

11. Tabular statement No. 2 gives separately the details of infectious diseases on vessels in the harbour and docks. The clothing and bedding of the crews of these vessels aggregating 659 persons were disinfected.

V.—Disinfection and Fumigation of Ships.

12. During the year under report 64 vessels of all classes were disinfected and fumigated.

13. Of the 64 vessels referred to in the foregoing paragraph, 22 vessels were fumigated by means of the Clayton process. Of this number, 19 were outward-bound pilgrim vessels, 1 was rat-infected, 1 was fumigated at the request of the owner for the purpose of embarking pilgrims but ultimately sailed as an ordinary ship with cargo and 1 was fumigated under the regulations for plague. In addition to these vessels, the British India Steam Navigation Company fumigated 29 steamers by their own apparatus. This number is not included in Tabular Statement No. 1.

14. The Port Disinfection Station received every Monday clothing and bedding from various hospitals for disinfection. 926 bundles containing clothing and bedding of this kind were disinfected, as against 624 bundles during the preceding year. The clothing of 2,548 baggage-coolies to work cargo on outward-bound vessels after the disinfection of their crews and or after obtaining Bills of Health, was disinfected at the request of the Commanders and Agents of the vessels.

VI.—General Health of Shipping.

15. During the year under report 1,176 persons connected with the shipping were admitted into the various hospitals in the city. St. George's Hospital admitted 418 European patients of whom 12

died, 394 were discharged cured and 12 remained under treatment after 31st December 1923. The Jamsetjee Jeejeebhoy Hospital admitted 292 Asiatic patients of whom 60 died, 220 discharged cured and 12 remained under treatment; the Gokuldas Tejpal Hospital admitted 443 Asiatics of whom 32 died and 411 were discharged cured; and the Arthur Road and Maratha Hospitals admitted 23 patients of whom 3 died, and 20 were discharged cured.

16. No deaths occurred in connection with the cleansing of bilges of ships during the year. There were 443 accidents on board of vessels which were lying in the harbour and docks. Of these 50 proved fatal.

VII.—Red Sea Pilgrim Traffic.

A—Outward Pilgrim Traffic.

17. In accordance with the orders of the Government of India in force, the Outward Pilgrim Traffic of the year under report began on the 5th April 1923. Before the pilgrims embarked at Bombay the ships were thoroughly cleansed and freed from rats by means of the Clayton process.

The pilgrims were medically inspected and their clothing and bedding disinfected before they were allowed to embark.

18. The names of the ships, the numbers of pilgrims carried by them and the date on which they left Bombay for Jeddah *via* Karachi with the exception of seven which sailed direct for Jeddah are given below:—

No.	Name of vessel.	Number o pilgrims sailed.	Date of departure, 1923.
1	S.S. "Jeddah"	867	22nd March *via* Karachi.
2	S.S. "Akbar"	855	14th April do.
3	S.S. "Zayani"	797	16th April do.
4	S.S. "Homayun"	500	23rd April do.
5	S.S. "Koweit"	860	30th April *via* Aden.
6	S.S. "Hejaz"	208	6th May *via* Karachi.
7	S.S. "Zayani"	368	20th May do.
8	S.S. "Jeddah"	777	21st May do.
9	S.S. "Shustar"	500	27th May do.
10	S.S. "Shujah"	837	29th May do.
11	S.S. "Sarvestan"	938	29th May do.
12	S.S. "Homayun"	590	7th June do.
13	S.S. "Sultania"	*1,647	11th June *via* Aden.
14	S.S. "Hejaz"	*869	15th June do.
15	S.S. "Zayani"	*1,064	21st June do.
16	S.S. "Arabestan"	*1,771	24th June do.
17	S.S. "Dara"	*1,438	25th June do.
18	S.S. "Frangistan"	*2,051	26th June do.
19	S.S. "Shustar"	*176	26th June *via* Karachi.
	Total number of pilgrims sailed ..	17,113	

* Owing to a mild outbreak of cholera among the pilgrims staying at various Mussaffir khanas in the town of Bombay they were inoculated with anti-cholera vaccine. The number of cases and deaths from cholera during the period from 8th June to 26th June 1923 as registered by the Health Department, Bombay Municipality, were 24 and 16 respectively.

19. The classification of pilgrims as far as it is obtainable is as follows :—

645	Bombay Presidency (including Sind).	827	Native States.
198	Bombay City.	19	Nepal.
597	Madras Presidency.	15	Tibet.
6,552	Bengal Presidency.	109	Malay State.
1,211	Assam Province.	131	Dutch Java.
231	Bihar and Orissa.	152	Persia.
1,224	Punjab and North-West Frontier.	69	Mesopotamia.
2,301	United Provinces and Oudh.	150	Russia.
103	Central Provinces.	298	China.
92	Rajputana.	576	Afghanistan.
276	Burmah.	72	Baluchistan.
23	Ceylon.	159	Arabia.
		30	South Africa.
		2	Egypt.
		1,048	Unclassified.
13,453		3,660	

Total ... 17,113

20. Thirteen thousand one hundred and ninety-four pilgrims were vaccinated before starting by a special staff placed at the disposal of the Police Commissioner by the Municipality. Besides these some pilgrims from other provinces and Native States had been vaccinated before leaving their homes for Bombay. 5,965 pilgrims were inoculuated for cholera as shown in paragraph 18 of this report.

21. Two cases of small-pox were landed at Karachi and Aden and one death from small-pox occurred before arrival at Aden. The ships were practically free from cholera and other infectious diseases on arrival at Kamaran.

22. Fifty deaths occurred at sea among pilgrims on out-going ships. They were chiefly due to old age, pneumonia, cardiac failure, tuberculosis, malaria, toxemia, dysentery, diarrhoea, asthma, phthisis, etc.

23. The Quarantine Camp at Kamaran was opened with the arrival of the first pilgrim ship there—the S.S. "Gorontalo" from the Dutch East Indies on the 25th January and closed with the departure of the S.S. "Shustar" from Bombay on the 16th July. The necessary Medical Staff required for the camp was provided by the Surgeon General with the Government of Bombay and they were despatched to Kamaran by passenger and pilgrim ships.

24. The S.S. "Zayani" on her arrival at Kamaran on 29th April was found to be overcrowded. There were in all 1,042 souls on board whereas she was certified to carry 997 pilgrims only. There was only one medical officer on board although the number of pilgrims exceeded a thousand. The ship left Bombay with 797 pilgrims.

25. The S.S. "Shustar"—the last pilgrim ship which arrived at Kamaran on 15th July—was found to be overcrowded. This overcrowding was due to the ship being allowed to carry 160 extra pilgrims from Karachi with the special sanction of Government on account of the fear of the pilgrims missing the Haj.

26. In his reports to Government submitted through the Military Administrator, Kamaran, the Director of the Kamaran Lazaretto reported the hygienic conditions on board the pilgrim ships as good and in some cases as excellent.

B.—Inward Pilgrim Traffic.

27. During the year under report 10,858 pilgrims arrived from Jeddah in 15 vessels as tabulated in Statement No. 3 which is appended to this report.

28. Three hundred and fifty-one deaths occurred among the pilgrims during the return voyage. The causes of deaths are chiefly attributed to Senile Debility, Phthisis, Dysentery, Pneumonia, Tuberculosis, Heat Apoplexy, Diarrhœa, Heart Failure, Malaria, Privation, etc.

29. One of the Medical Officers on a pilgrim ship returning with pilgrims from Jeddah describes in his diary the deplorable state of pilgrims as follows:—

> "Many a pilgrim on embarkation declared that they had not had a morsel of food for over a week and some even a fortnight. A small plate of rice cost Rs. 3 and a glass of water 8 annas in Mecca. The water given was generally from doubtful sources and very likely not potable, hence the predominance of gastic affections and intestinal troubles."

30. Two cases of small-pox were removed from two pilgrim ships on arrival at Bombay, to the Arthur Road Hospital for treatment, and two cases of of small-pox and one case of measles were landed at Aden and Karachi.

VIII.—Sanitary State of the Harbour and Foreshore.

31. The sanitary state of the harbour and of the various Bunders and Docks was fair.

IX.—Cholera, Small-pox, Plague, Acute Pneumonia and Influenza in the City of Bombay.

32. During the year under report 189 deaths from cholera, 479 deaths from small-pox, 1,319 deaths from plague, 9,586 deaths from acute pneumonia and 250 deaths from influenza occurred in the City of Bombay during the year 1923 as against 15 deaths from cholera, 61 deaths from small-pox, 632 deaths from plague, 9,117 deaths from acute pneumonia and 528 deaths from influenza during the preceding year.

X.—General.

33. Dr. H. Carey Venis, D.P.H., was in charge of the Port Health Department from 1st January to 16th November, during the undersigned's absence on leave to England. The undersigned took over the duties of the Port Health Officer from him on the forenoon of the 17th November 1923.

34. The members of the Medical, Clerical and Sanitary Police Staffs performed their duties satisfactorily.

35. I regret to record the death of Mr. Shamrao S. Dhurandhar, Second Clerk, on 13th May 1923, after having served in this office for over 24 years.

36. The services of an extra Medical Officer and Lady Doctor had to be requisitioned on a few occasions as usual, when the work was unusually heavy.

W. M. HOUSTON,
M.B., D.P.H.,
Lieut.-Col., I.M.S.,
Health Officer of the Port

Bombay Port Health Office,
New Customs House,
Dated 19th March 1924.

TABLE No. 1.

The following Tabular Statement giving a summary of the Shipping of the Bombay Port and work done in connection therewith for the year ending 31st December 1923 :—

Vessels including Country Craft.	Number of vessels inspected.	Number of persons inspected.	No. of Asiatic and African crew and 3rd class or Deck Passengers disinfected.	Number of vessels.		Number of persons.		Diseases and cases of each.									
				Disinfected.	Fumigated.	Vaccinated.	Inoculated.	Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Jiggar.	Scarlatina.	Influenza.	Pneumonia.	Cerebro Spinal Fever.
Entered ...	136	43,682	11,595	20	1	223	...	2	6	8	12	12	6	...	32	6	...
Left ...	645	134,423	70,985	...	20	13,194	5,965	...	...	8	1	3	...	...	...	...	...
In Harbour during the year.	13	659	659	13	1	...	...	1	5	7	2	1	...	1	2	...	...
Total ...	794	178,764	83,239	42	22	13,416	5,965	3	11	23	15	16	6	1	34	6	...
Total for 1922 ...	918	172,037	71,501	43	18	7,994	...	1	...	13	3	16	5	1	109	25	1

TABLE No. 2.

The following table includes all Steamships Square-rigged Vessels and Native Sailing Craft which become infected while lying in the Port of Bombay during the year 1923 :—

Months, 1923.	No. of persons who were infected with infectious disease in the Docks and Bandars.			Total number of infected vessels.	Total No of infectious diseases in the Bombay Harbour.								No. of crew disinfected.
	Plague.	Cholera.	Influenza.		Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Influenza.	Pneumonia.	Scarlet Fever.	
January ...	...	...	...	1	...	...	...	...	...	...	...	1	...
February ...	...	...	...	2	...	...	2	...	1	...	...	...	166
March ...	...	...	...	3	...	...	2	2	...	...	...	...	228
April ...	1	...	1	1	1	...	1	...	...	1	...	...	2
May ...	...	...	...	...	...	...	...	...	...	...	...	...	...
June ...	...	...	...	...	...	...	...	...	...	...	...	...	...
July ...	...	...	...	1	...	1	...	...	...	...	...	...	67
August ...	...	1	...	3	...	4	...	...	...	...	...	...	86
September ...	...	...	1	...	...	...	...	...	...	1	...	...	...
October ...	...	...	...	1	...	...	1	...	...	...	...	...	70
November ...	...	...	...	1	...	...	1	...	...	...	...	...	30
December ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	1	1	2	13	1	5	7	2	1	2	...	1	659

TABLE No. 3.

Statement showing the number of pilgrims who arrived in Bombay from Jeddah by vessels during the year 1923.

No.	Name of Ship.	Date of arrival 1923.	Number of crew inspected.	Number of pilgrims inspected.	Number of deaths during voyage.
1	S.S. "Frangistan" ...	12th August ...	153	449	35
2	S.S. "Jeddah" ...	14th ,, ...	113	1,164	20
3	S.S. "Englistan" ...	16th ,, ...	113	831	57
4	S.S. "Dara" ...	17th ,, ...	106	765	30
5	S.S. "Sultania" ...	18th ,, ...	101	327	32
6	S.S. "Shustar" ...	20th ,, ...	90	190	18
7	S.S. "Homayun" ...	1st September ...	97	1,026	11
8	S.S. "Shuja" ...	4th ,, ...	103	644	22
9	S.S. "Dara" ...	21st ,, ...	109	677	8
10	S.S. "Englistan" ...	26th ,, ...	120	1,525	41
11	S.S. "Sultania" ...	29th ,, ...	102	839	14
12	S.S. "Shustar" ...	12th October ...	89	525	16
13	S.S. "Jeddah" ...	27th ,, ...	116	725	18
14	S.S. "Zayani" ...	4th November ...	92	760	28
15	S.S. "Jeddah" ...	23rd December ...	106	391	1
	Total ...	.....	1,610	10,858	391

No.	Name of Ship.	Number of cases of infectious disease on board.		Remarks.
		On arrival.	During voyage.	
1	S.S. "Frangistan" ...	.....	.....	1,690 pilgrims landed at Karachi.
2	S.S. "Jeddah" ...	1 Small-pox ...	.....	.....
3	S.S. "Englistan" ...	1 Small-pox ...	1 Small-pox landed at Aden.	1,190 pilgrims landed at Karachi.
4	S.S. "Dara" ...	.....	.....	643 ,, ,,
5	S.S. "Sultania" ...	.....	.....	1,283 ,, ,,
6	S.S. "Shustar" ...	.....	1 Small-pox case landed at Karachi.	553 ,, ,,
7	S.S. "Homayun" ...	.....	.....	.....
8	S.S. "Shuja" ...	.....	.....	908 pilgrims landed at Karachi.
9	S.S. "Dara" ...	.....	.....	699 ,, ,,
10	S.S. "Englistan" ...	.....	1 Measles landed at Karachi.	734 ,, ,,
11	S.S. "Sultania" ...	.....	.....	947 ,, ,,
12	S.S. "Shustar" ...	.....	.....	272 ,, ,,
13	S.S. "Jeddah" ...	.....	.....	469 ,, ,,
14	S.S. "Zayani" ...	.....	.....	494 ,, ,,
15	S.S. "Jeddah" ...	.....	.....	.....
	Total ...	2 Small-pox ...	2 Small-pox 1 Measles.	.....

APPENDIX II (*b*).

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT, KARACHI, FOR THE YEAR ENDING 31ST DECEMBER 1923.

I.—Outgoing Vessels.

442 steamers outward bound for ports out of India were medically inspected and given Bills of Health during the year under report.

Of this number 266 steamers were proceeding to Aden, the Red Sea and Europe, and 176 to other ports out of India including the Persian Gulf.

330 country crafts were also granted Bills of Health after medical inspection.

The Indian crews as well as deck and third class passengers of all steamers and country crafts proceeding to ports out of India were medically inspected and their clothing, bedding and other articles disinfected at the Port Health Disinfecting Station, Kiamari, prior to their departure from the Port of Karachi.

II.—Incoming Vessels.

During the year under report 95 steamers arrived in the harbour in quarantine and were duly inspected on their arrival.

Of these 95 steamers, 42 arrived from East African Ports, 13 from Jeddah *vid* Aden, and the remaining 40 from various other Ports.

8 country crafts arrived here in quarantine from East African Ports and were duly inspected on their arrival.

III.—Synopsis of Inspection and Disinfection Performed.

During the year under report the following tabular statement shows the number of vessels, crews and passengers inspected :—

	Vessels.			Crews and Passengers.		
	Steamers.	Country boats.	Total.	Of Steamers.	Of Country boats.	Total.
Incoming ...	95	8	103	29,569	85	29,654
Outgoing ...	442	330	772	83,822	4,096	87,918
					Total ...	1,17,572

Of these 1,17,572 persons (crews and passengers) who were medically inspected on their arrival at, or departure from, the port of Karachi, 50,429 persons (crews and passengers) also had their clothing, bedding and other articles disinfected.

IV.—Miscellaneous Disinfection.

During the year the clothing and bedding of patients suffering from infectious diseases, as well as the clothing and bedding of contacts which were received for disinfection from the Epidemic Diseases Hospital, the Civil Hospital and other Institutions in Karachi, also from private individuals, were duly disinfected in the Equifex Stoves of the Port Disinfecting Station, Kiamari.

In addition to the above a large number of bundles of clothing, bedding, etc., which were sent for disinfection from the Military Department, Manora, Customs Department, Karachi, Karachi Port Trust and the Health Officer of the Karachi Municipality, were duly disinfected at the Port Disinfecting Station during the year under report.

V.— Plague.

No cases of this disease occurred amongst the shipping during the year under report but two deaths from plague reported of two incoming vessels, *viz.*, one death on board the S.S. "Netravati" among the Indian crew from Bombay and the other on board the S.S. "Barala" among the deck passengers from Persian Gulf. The following precautionary measures were duly carried out on arrival of these steamers at Karachi :—

The crew and passengers with their kit of the S.S. "Netravati" disinfected, the ship was Claytonised and a telegram was duly despatched to Port Health Officer, Bombay, for information.

The Karachi passengers with their kit of the S.S. "Barala" were disinfected before proceeding to their destination and a telegram was sent to Port Health Officer, Bombay, for information as the ship continued her voyage to Bombay. No further cases of plague reported on board these steamers before sailing to Bombay.

On the 13th November 1923 a telephone message was received from the Officer in charge Supply Depôt of Government Stores Dock Area, Kiamari, to the effect that rats were found dying in one of their godowns. The rats were sent accordingly for Bacteriological examination and were found to be infected with B. Pestis. All the necessary precautions were duly taken such as disinfection of the godowns with pesterine and all the ships were rat guarded. The rats from 28th December 1923 have been found to be free from plague. Information of this and all action taken was immediately forwarded to the Public Health Commissioner with the Government of India, Simla, together with a weekly report of dead and infected rats found in the Port.

No plague infected rats were found in any other area of the Dock.

VI.—Cholera.

Four deaths from cholera were reported during the year from incoming vessels, *viz.*, one from S.S. "Vita" on 22nd July, one

from S.S. "Barpeta" on 25th August, one from S.S. "Bandra" on 7th September and one from S.S. "Bamora" on 23rd September. On arrival at Karachi of these steamers all necessary precautionary measures were duly carried out and telegraphic information was duly sent, in each case, to the Port Health Officer, Bombay, as these steamers continued their journey to Bombay. Of these deaths one was on a vessel from Bombay and the other three on vessels from the Gulf Ports.

One case of cholera was removed to the Epidemic Diseases Hospital, Karachi, from the S.S. "Vita" from Bombay on 22nd July, the necessary precautionary measures were duly carried out and no further case of cholera occurred on board the vessel. A telegram was duly despatched to the Port Health Officer, Bombay, for information and necessary action as this steamer sailed for Bombay.

The S.S. "Barjora," which arrived here from Basra on the 13th September, reported that a case of cholera amongst the Indian crew was removed at Bander-Abas on the 8th September, the necessary precautionary measures were duly carried out at Karachi and a telegram was duly sent to the Port Health Officer, Bombay, for information as the "Barjora" continued her voyage for Bombay.

Telegraphic information was received from the Port Health Officer, Bombay, that a fireman of the S.S. "Bamora" died from cholera on 23rd August 1923. On arrival of this steamer at Karachi the crew and passengers were duly medically inspected and were found to be free from cholera.

VII.—Small-Pox.

During the year under report three cases of small-pox were removed from incoming vessels to the Epidemic Diseases Hospital, *viz.*, one from H.M.T. "Hecuba" on 3rd February, one from S.S. "Vasna" on 3rd May and one from S.S. "Barala" on 15th May. The usual precautionary measures were duly carried out on board the steamers concerned on their arrival.

At the usual medical inspection of deck passengers before embarkation, three cases of small-pox were detected during the year and they with the contracts were not allowed to proceed to their destinations.

VIII.—Chicken-Pox.

Telegraphic information was received from the Port Health Officer, Bombay, that two cases of chicken-pox and one case of pneumonia amongst the Military Passengers were removed at Bombay from the H.M.T. "Marglen". On arrival of the steamer at Karachi the crew and passengers were found to be free from all infectious diseases. No further cases of chicken-pox occurred on board the steamer during her stay in Karachi.

IX.—Measles.

Two cases of measles occurred during the year, *viz.*, one among the Indian crew of the I.G.T.S. "Patrick Stewart" and one deck passenger from the S.S. "Vita". The usual measures (removal of the patients to hospital, disinfection of kit and quarters, etc.) were carried out and no further cases occurred.

X.—Parotitis (Mumps), Yellow Fever, Jigger, Sleeping-Sickness, Scarlet Fever, Acute-Pneumonia and Cerebro-Spinal Meningitis.

No cases of these diseases were detected during the year.

XI.—Influenza.

Three cases of influenza amongst the crew of the S.S. "City of Cairo" were removed to hospital for treatment during the year, and the necessary precautionary measures taken on board. No further case occurred.

XII.—Non-Notifiable Diseases.

During the year under report eight cases of non-notifiable diseases amongst the crews and passengers were detected and sent to the Civil Hospital, Karachi, for treatment.

XIII.—Deaths from Non-Notifiable Diseases.

Twenty-six deaths from various diseases were reported as having occurred on board the vessels either in Karachi Harbour or during the voyage to Karachi during the year.

XIV.—Emigrants.

No emigrants embarked from this port during the year.

XV.—Red Sea Pilgrim Traffic.

A.—*Outward Pilgrim Traffic.*

In accordance with the Orders of the Government of India in force, the Outward Pilgrim Traffic of the year under report began on the 26th March 1923, 14 steamers carrying 7,133 pilgrims who embarked at Karachi sailed hence for Jeddah *viâ* Aden during the Haj Season of 1923.

The number of steamers and pilgrims sailed from Karachi last year were 11 and 3,975, respectively.

Before the pilgrims were allowed to embark they were medically inspected and their clothing and bedding, etc., disinfectsd at the Port Health Disinfecting Station, Kiamari, Karachi.

The names of the ships, the numbers of pilgrims carried by them and the dates on which they left Karachi for Jeddah *vid* Aden are given below in tabular form :—

No.	Name of steamers.	Number of pilgrims embarked at Karachi.	Date of departure.
1	S.S. "Jeddah"	109	26th March 1923.
2	S.S. "Akbar"	327	19th April 1923.
3	S.S. "Zayani"	220	20th do.
4	S S. "Homayun"	442	27th do.
5	S.S. "Hejaz"	666	10th May 1923.
6	S.S. "Zayani"	635	23rd do.
7	S.S. "Jeddah"	415	25th do.
8	S.S. "Shushtar"	311	31st do.
9	S.S. "Shuja"	558	1st June 1923.
10	S.S. "Sarvestan"	559	3rd do.
11	S.S. "Accra"	549	8th do.
12	S.S. "Homayun"	360	11th do.
13	S.S. "Jeddah"	1,188	25th do.
14	S.S. "Shushtar"	794	1st July 1923.
	Total ...	7,133	

Out of 14 steamers 2 steamers, *viz.*, S.S. "Accra" and S.S. "Jeddah" were thoroughly cleansed and freed from rat by means of the Clayton process as these 2 steamers sailed direct from Karachi to Jeddah *vid* Aden with pilgrims and the rest all fumigated in Bombay before sailing to Jeddah *vid* Karachi. The number of rats found dead after fumigation is "Accra"— 127, "Jeddah"—*Nil*, but two buckets of Cockroaches.

At the disinfection and medical inspection of Karachi pilgrims at the Port Health Disinfecting Station, Kiamari, Karachi, of the S.S. "Homayun" on the 27th April 1923 one of the pilgrims was found to be suffering from small-pox and was therefore not allowed to proceed with his contacts.

The S.S. "Jeddah" which arrived at Karachi from Bombay with pilgrims on the 25th March 1923, reported a case of small-pox amongst the Bombay pilgrims. The patient was removed to the Epidemic Diseases Hospital, Karachi, for treatment. The necessary precautionary measures were duly taken on board.

The S.S. "Jeddah" and S.S. "Homayun" arrived at Karachi from Bombay with pilgrims on the 24th May and 9th June, respectively, reported a death on each steamers amongst Bombay pilgrims from Senile debility and Old age during the voyage from Bombay to Karachi.

B.—Inward Pilgrim Traffic.

The following table shows the number of pilgrims who returned to Karachi from Jeddah, the names of the ships in which they travelled, and other particulars :—

No.	Name of steamers.	Date of arrival.	No. of crew.	No. of pilgrims for Karachi.	No. of deaths during voyage.	No. of cases of infectious disease during voyage or on arrival.
1	"Frangestan" ...	9th August 1923 ...	154	1,690	32	Nil
2	"Englestan" ...	13th August 1923 ...	109	1,190	52	Do.
3	"Sultania" ...	14th August 1923 ...	101	1,335	30	Do.
4	"Dara" ...	Do. ...	106	643	26	Do.
5	"Shushtar" ...	15th August 1923 ...	90	454	16	1
6	"Hejaz" ...	Do. ...	94	840	20	Nil
7	"Shuja" ...	1st September 1923...	103	908	16	Do.
8	"Dara" ...	18th September 1923.	110	699	7	Do.
9	"Englestan" ...	23rd September 1923.	121	734	34	1
10	"Sultania" ...	26th September 1923.	102	947	14	Nil
11	"Shushtar" ...	8th October 1923 ...	89	267	16	Do.
12	"Jeddah" ...	24th October 1923 ...	116	469	16	Do.
13	"Zayani" ...	31st October 1923 ...	92	494	21	Do.
		Total ...	1,387	10,670	300	2

In all 10,670 pilgrims returned to Karachi during the pilgrim Season of 1923 whereas the numbers of pilgrims who returned to Karachi during the previous Haj Season of 1922 was 5,842.

The pilgrim ship "Shushtar" arrived from Jeddah on the 15th August 1923 with pilgrims, reported one case of small-pox on board amongst the pilgrims. The patient was removed to the Epidemic Diseases Hospital, Karachi, for treatment and died there the same day. The part occupied by the patient was throughly

disinfected and a telegram was duly despatched to Port Health Officer, Bombay, for information as the ship continued her voyage to Bombay with returning pilgrims on board for Bombay.

The pilgrim ship "Englestan" which arrived here from Jeddah with returning pilgrims on 23rd September 1923, reported one convalescent case of measles amongst the pilgrims. The patient and contacts were disembarked at Karachi and disinfected before being allowed to proceed to their destinations.

Three-hundred deaths as shown in the tabular Form B, which occurred during the voyage amongst the pilgrims returning from the Haj to Karachi were reported by the Medical Officers of the ships concerned as being due to general debility, bronchitis, dysentery, chronic malaria, diarrhoea, phthisis, heart failure and old age.

As stated by the Public Health Commissioner with the Government of India in his letter No. 752/11476, dated 31st August 1923, to put cholera vaccine on board the pilgrim ships proceeding to Jeddah for bringing back stranded pilgrims. Vaccine was ordered from the Director of the Central Research Institute, Kasauli, and was placed on one of the pilgrim ship "Zayani" during the year.

XVI.—Clayton Apparatus.

During the year six steamers were claytonised (fumigated) by means of the Clayton Apparatus, *i.e.*, 1 for plague, 2 pilgrim ships and 3 at the request of the Agents before sailing to Ports out of India.

XVII.—Sanitary State of the Harbour.

The sanitary state of the harbour was satisfactory.

XVIII.—Plague, Cholera, Small-pox, Measles, Chicken-pox, Influenza, and Acute-Pneumonia in the City of Karachi.

During the year under report 466 deaths from plague, 37 deaths from small-pox, 25 deaths from influenza, 774 deaths from measles and nil from cholera and chicken-pox occurred in the City of Karachi as against 653 deaths from plague, 175 deaths from small-pox, 101 deaths from measles, 118 deaths from influenza and 375 deaths from acute-pneumonia during the previous year.

XIX.—Board of Health, Karachi.

The office work of the Board of Health, Karachi, which was carried out in the Office of the Civil Surgeon, Karachi, has now from 10th February 1923 been carried out in the Port Health Office, Karachi, as per Government Resolution, General Department, No. 3498, dated 29th January 1923.

XX.—Staff.

The Medical Staff and the Members of the Steam Launch, Disinfecting Station and Clayton Apparatus Establishments worked satisfactorily during the year.

Mr. Mahomed Jaffer Shaikh Ibrahim, the only clerk in this office carried out his duties in a most satisfactory manner, notwithstanding the great increase in work during the year.

He has been clerk of this office since 1900.

H. F. OTTO,

Port Health Office,
Kiamari, Karachi.
Dated 15th January 1924.

Lieutenant, I.M.D.,
Acting Health Officer of the Port,
Karachi.

APPENDIX II (*c*).

Annual Report of the Health Officer of the Port of Aden for the year 1923.

I.—General Remarks.

One thousand two-hundred and eighty-nine vessels and rigged vessels were granted bills of health during the year.

Of the above number 949 were sailing under the British flag and 340 under Foreign flags. Bills of health issued to vessels having had cases of infectious diseases on board were annotated according to the circumstances of each case.

One thousand two-hundred and sixty-four bills of health were granted to Dhows during the year.

The accompanying table A, gives a list of vessels on board of which infectious diseases existed on arrival. In the case of these vessels all sanitary precautions were taken to prevent the spread of disease.

The following cases of infectious diseases were landed from the shipping :—

Small Pox	... 6	Chicken Pox	... 2
Measles	... 1	Pneumonia	... 1

II.—Table A.

Thirty-eight ships carrying pilgrims passed through the port of Aden during the year. All were medically examined; but they were not granted pratique—

Year.	No. of ships.	No. of pilgrims.	No. of deaths.
1923	38	44,591	119

III.—TABLE A.

The following is the list of vessels on board of which cases of infectious diseases existed on arrival at this port during the year :—

Date.	Name of Ship.	Nationality.	From	To	No. of cases.	Remarks.
11th February 1923.	"H. T. Assaye" ...	British ...	Bombay ...	United Kingdom.	1 Measles.	Treated on board.
14th February 1923.	S. S. "Kaiser-i-Hind".	Do. ...	China ...	London ...	1 Chicken Pox.	Do.
20th March 1923.	"H. T. Derbyshire".	Do. ...	Constantinople.	Bombay...	2 Small Pox.	* Landed.
24th March 1923.	S. S. "Kaiser-i-Hind".	Do. ...	London ...	Do. ...	Do. ...	Treated on board.
25th March 1923.	,, "Roma" ...	Italian ...	Zanzibar .	Genoa ...	2 Do. (suspected).	Do.
2nd April 1923.	"Jeddah" ...	British ...	Bombay ...	Jeddah ...	1 Small Pox	* Landed.
8th April 1923 .	,, "Chindwin".	Do. ...	Rangoon...	Southampton.	1 Chicken Pox.	Do.
16th April 1923.	,, "Mathura" ...	Do. ...	Do. ...	English Channel.	1 Small Pox.	Do.
13th May 1923 .	,, "Devanha" ...	Do. ...	London ...	Yokohama.	1 Chicken Pox.	Treated on board.
29th May 1923 .	,, "Malda" ...	Do. ...	Do. ...	Calcutta...	1 Pneumonia.	* Landed.
30th May 1923 .	,, "Zayani" ...	Do. ...	Karachi ...	Jeddah ...	2 Do. ...	Treated on board.
1st June 1923...	,, "Jeddah" ...	Do. ...	Bombay ...	Do. ...	1 Do. ...	Do.
10th June 1923.	,, "Kalyan" ...	Do. ...	London ...	Bombay ...	1 Do. ...	Do.
19th June 1923.	,, "Chindwin" .	Do. ...	Suez ...	Rangoon...	1 Chicken Pox.	Do.
3rd August 1923.	,, "Australia" .	Do. ...	Bombay ...	Port-Sudan.	1 Measles.	* Landed.
7th August 1923.	,, "Englestan" .	Do. ...	Jeddah ...	Bombay...	1 Small Pox.	Treated on board.
19th September 1923.	,, "Murkara" ...	Do. ...	London ...	Culcutta .	2 Measles.	Do.
17th October 1923.	,, "Manela" ...	Do. ...	Antwerp...	Do. ...	1 Pneumonia.	Do.
23rd October 1923.	,, "Ville de Strosbourg" .	France ...	Marseilles.	Australia *via* Colombo.	1 Chicken Pox.	* Landed.
24th October 1923.	,, "Mantua" ...	British ...	Bombay ...	London ...	1 Do. ...	Treated on board.
8th December 1923.	,, "Maldavia" .	Do. ...	London ...	Australia.	1 Pneumonia.	Do.
12th December 1923.	"H. T. Hecuba" .	Do. ...	Southampton.	Bombay ...	1 Small Pox.	* Landed.
16th December 1923.	S. S. "British Ensign."	Do. ...	Abadan ...	Swansea...	1 Do. ...	* Landed.

N.B.—Modified cases of Small-pox amongst the Asiatic Crew were removed and sent to I. D. H. Maalla from R. N. Misurata while she was lying in the harbour in January 1923.

* Denotes the cases landed and treated by the Military authorities in Aden.

IV.

The following are the names and other information regarding the pilgrimships which passed through Aden during the year under report :—

Date.	Name of Ship.	Nationality.	From	To	Number of		
					Pilgrims.	Infectious Cases.	Deaths.
2nd April 1923.	S. S. "Jeddah" ...	British.	Bombay ...	Jeddah ...	971	1 Small Pox.	2
26th April 1923.	„ "Akbar" ...	Do. ...	Bombay *via* Karachi.	Do. ...	1,184	...	...
27th April 1923.	„ "Zayani" ...	Do. ...	Karachi ...	Do. ...	1,013	...	2
4th May 1923 ...	„ "Homayun"	Do. ...	Bombay *via* Karachi.	Do. ...	942	...	...
8th May 1923 ...	„ "Koweit" ...	Do. ...	Do. ...	Do. ...	865	...	1
18th May 1923.	„ "Hejaz" ...	Do. ...	Bombay ..	Do. ...	872	...	2
30th May 1923.	„ "Zayani" ...	Do. ...	Karachi ...	Do. ...	1,002	2 Pneumonia.	1
1st June 1923 ...	„ "Jeddah" ...	Do. ...	Bombay ...	Do. ...	1,189	1 Do. ...	1
Do. ...	„ "Dara" ...	Do. ...	Bussrah ...	Do. ...	1,281	Do. ...	1
8th June 1923...	„ "Shushtar".	Do. ...	Karachi ...	Do. ...	799	...	2
Do. ...	„ "Shuja" ...	Do. ...	Bombay ...	Do. ...	1,393	...	3
9th June 1923 .	„ "Servistan".	Do. ...	Karachi ...	Do. ...	1,497	...	...
19th June 1923.	„ "Accra" ...	Do. ...	Bombay ...	Do. ...	550	...	...
20th June 1923.	„ "Homayun".	Do. ...	Do. ...	Do. ...	948	...	3
21st June 1923 .	„ "Sultania" .	Do. ...	Do. ...	Do. ..	1,647	...	2
28th June 1923.	„ "Hejáz" ...	Do. ...	Do. ...	Do. ...	873	...	...
3rd July 1923 ...	„ "Akbar" ...	Do. ...	Musket ...	Do. ...	762	...	2
4th July 1923 ...	„ "Zayani" ...	Do. ...	Bombay ...	Do. ...	1,063	...	1
Do. ...	„ "Trengistan".	Do. ...	Do. ...	Do. ...	2,051	...	...
Do. ...	„ "Dara" ...	Do. ...	Do. ...	Do. ...	1,435	...	3
5th July 1923 ...	„ "Arbistan" ...	Do. ...	Do. ...	Do. ...	1,770	...	1
Do. ...	„ "Jeddah" ...	Do. ...	Karachi ...	Do. ...	1,188	...	...
13th July 1923.	„ "Shushtar".	Do. ..	Do. ...	Do. ...	1,008	...	3
4th August 1923.	„ "Servistan".	Do. ...	Jeddah ...	Java ...	1,405	...	6
6th August 1923.	„ "Jeddah" ...	Do. ...	Bombay ...	Jeddah ...	1,178	...	6
Do. ...	„ "Sultania" .	Do. ...	Jeddah ...	Bombay ...	1,624	...	5
7th August 1923.	„ "Hejaz" ...	Do. ...	Do. ...	Karachi ...	850	...	9
Do. ...	„ "Englestan".	Do. ...	Do. ...	Bombay ...	2,004	1 Small Pox.	17
Do. ...	„ "Dara" ...	Do. ...	Do. ...	Do.	1,430	...	9

IV—*continued.*

Date.	Name of Ship.	Nationality.	From	To	Number of Pilgrims.	Number of Infectious Cases.	Number of Deaths.
9th August 1923.	S. S. "Akbar" ...	British...	Jeddah ...	Persian Gulf.	1,163	...	9
10th August 1923.	" "Celebus '...	Do. ...	Do. ...	Java ...	1,388	...	5
13th August 1923.	" "Zayani" ...	Do. ...	Do. ...	Persian Gulf.	818	...	5
25th August 1923.	" "Homayun".	Do. ...	Do. ...	Bombay ...	1,033	...	4
10th September 1923.	" "Dara" ...	Do. ...	Do. ...	Karachi and Bombay *via Makalla*,	1,556	...	1
21st September 1923.	" "Akbar" ...	Do. ...	Do. ...	Bussrah ...	1,295	...	4
30th September 1923.	" "Shushtar".	Do. ...	Do. ...	Bombay *via* Makalla and *Karachi*.	871	...	2
13th October 1923.	" "Jeddah"...	Do. ...	Do. ...	Bombay ...	1,290	...	7
15th December 1923.	" Do. ...	Do. ...	Do. ...	Do. ...	888	...	...

V.—Establishment.

Lieut.-Colonel J. L. Marjoribanks, M.D., D.P.H., I.M.S., held the apointment of Port Health Officer, Aden, from 1st January to 27th July 1923, and was relieved by Major E. S. Phipson, D.S.O., M.D., D.P.H., I.M.S., who held the appointment from 28th July to 31st December 1923.

VI.—Office Establishment.

Mr. A. K. Taijubux held the appointment of Port Health Clerk from 1st January to 27th November 1923, and his services were dispensed with effect from 28th November 1923. Mr. Ahmed Ismail was appointed as a 5th Grade Clerk from 28th November 1923 *vice* Mr. A. K. Taijubux, and held the appointment up to 31st December 1923.

Peon Omer Abubaker held the appointment as a peon from 1st January to 2nd November 1923. He was granted privilege leave for one month and two days from the afternoon of 3rd November 1923. Saleh Mohamed was appointed temporarily to act for him during his absence on leave.

VII.—Launch Establishment.

1. Driver Hussein Noman from 1st January to 30th September 1923. He was granted six months leave from 1st October 1923 on average and half average pay. Stoker Abdo Noman from

1st January to 30th September 1923 and was appointed to act for the driver during his absence on leave from 1st October to 31st December 1923.

2. Succani Mohamed Magon from 1st January to 31st March 1923 and from 23rd August to 31st December 1923. He was on privilege leave for three months and eleven days combined with leave on average pay for one month and eleven days from 1st April to 22nd August 1923. Lascar Ali Magon from 1st January to 31st March 1923 and from 23rd August to 31st December 1923 and was appointed to act for the Succani during his absence on leave.

3. Taher Noman (Outsider) was appointed to act for the Stoker from 1st October to 31st December 1923, as the permanent Stoker was acting in the leave vacancy of the Driver.

4. Hassan Ali (Outsider) was appointed to act for the Lascar from 1st April to 22nd August 1923, as the permanent Lascar was acting in the leave vacancy of the Succani.

VIII.—Disinfecting Stove.

A fireman was retained for the care of the Disinfecting Stove during the year in accordance with Government Order, General Department, No. 4607 of 18th April 1920.

E. S. PHIPSON,
M.D., D.P.H., Major, I.M.S.,
Health Officer of the Port, Aden.

8th March 1924.

APPENDIX III.

The following table shows when drainage systems and water-works were completed in the towns mentioned therein, with the average annual death-rate for the five-year period preceding the introduction and also the ratio for the five-year period ending with the year under report exclusive of recorded plague and influenza mortality :—

The rural death-rate for each District are added for comparison.

Districts.	Town.	Date of completion of works of		Mean death-rate for five years ending 1923.		Average annual death-rate for the five year period preceding the introduction of drainage or water-supply or both.	Death-rate (exclusive of plague) in adjoining rural circle.	Remarks.
		Drainage.	Water-supply.	Excluding plague death-rate.	Excluding plague and influenza death-rates.			
1	2	3	4	5	6	7	8	9
.....	Bombay ...	(a) 1,879	(b) 1,892	45·06	38·00	27·08	...	
West Khandesh ...	Dhulia ...	...	1,896	22·91	22·00	32·50	24·28	
Ahmednagar ...	Ahmednagar ...	...	1,897	25·75	23·47	55·65	24·93	
Surat ...	Surat ...	...	1,898	31·48	30·57	39·77	24·89	
Ahmedabad ...	Ahmedabad ...	(c) 1,893	1,891	42·05	40·31	45·21	24·30	
Karachi ...	Karachi ...	(c) 1,895	1,894	35·98	32·77	35·15	7·63	
Sukkur ...	Sukkur ...	...	1,895	21·50	19·61	28·70	23·00	
Bombay Suburban ...	Bandra ...	...	1,896	24·63	21·58	26·01	16·82	
Kolaba ...	Panvel ...	...	1,895	22·85	22·85	19·50	23·75	
Dharwar ...	Hubli ...	...	1,893	25·49	23·77	25·70	21·33	
Ahmedabad ...	Viramgam ...	(d) 1,893	...	32·59	30·56	69·23	24·77	
East Khandesh ...	Jalgaon ...	...	1,909	20·62	19·64	31·56	27·27	
Sholapur ...	Pandharpur ...	...	1,911	51·06	49·85	49·98	27·93	
Nasik ...	Nasik ...	...	1,913	36·15	34·27	52·73	24·67	
Bijapur ...	Bijapur ...	...	1,913	22·48	22·37	30·06	21·68	
Poona ...	Poona ...	1,916	...	45·34	41·27	36·47	14·57	
Nasik ...	Trimbak ...	...	1,921	29·81	27·91	43·88	24·67	

(a) Drainage works commenced in 1879 are still in progress.

(b) Tansa water-works completed in 1892. Besides there are Vehar and Tulsi water-works.

(c) Drainage system partially introduced.

(d) In 1893 the gradient of the channel round the town was improved to carry away the Sullage water that used to accumulate and stagnate round the town.

APPENDIX IV.

APPENDIX

ANNUAL FORM NO. I.—*Showing the Births registered in the*

1	2	3			4		
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1921.			NUMBER OF BIRTHS REGISTERED.		
		Male.	Female.	Total.	Male.	Female.	Total.
	Western Registration District.						
1	East Khándesh	545,376	529,746	1,075,122	28,696	26,891	55,587
2	West Khándesh	309,511	303,201	612,712	14,819	14,216	29,035
3	Násik	418,510	406,706	825,216	19,478	18,158	37,636
4	Thána	388,310	368,589	756,899	11,888	11,317	23,185
5	Bombay Suburban	87,567	63,874	151,441	1,404	1,292	2,696
6	Kolába	279,350	283,122	562,472	11,227	10,527	21,754
7	City of Bombay	751,948	396,867	1,148,815	10,500	10,164	20,664
	Central Registration District.						
8	Ahmednagar	362,947	361,031	723,978	18,969	17,895	36,864
9	Poona	500,601	487,080	987,681	18,114	16,306	34,420
10	Sholápur	382,374	359,256	741,630	16,322	15,364	31,686
11	Sátára	511,238	514,457	1,025,695	20,744	19,726	40,470
12	Ratnágiri	525,035	628,895	1,153,930	22,547	21,258	43,805
	Southern Registration District.						
13	Belgaum	484,615	465,047	949,662	19,909	18,894	38,803
14	Dhárwár	528,348	507,861	1,036,209	18,609	17,776	36,385
15	Bijápur	405,148	391,208	796,356	16,616	16,036	32,652
16	Kánara	203,959	197,526	401,476	7,493	6,994	14,487
	Gujarát Registration District.						
17	Surat	337,276	336,845	674,121	11,659	10,753	22,412
18	Broach	158,568	149,143	307,711	6,898	6,768	13,666
19	Kaira	379,702	331,203	710,905	14,143	12,379	26,522
20	Panch Mahális	193,385	181,446	374,831	7,059	6,567	13,626
21	Ahmedabad	473,693	444,231	887,924	17,345	15,856	33,201
	Sind Registration District.						
22	Karáchi	302,563	228,094	530,657	6,936	5,947	12,883
23	Hyderabad	316,834	250,415	567,249	5,672	4,378	10,050
24	Thar and Párkar	221,074	175,233	396,307	4,932	4,043	8,975
25	Nawabshah	233,826	184,826	418,652	5,210	3,846	9,056
26	Lárkána	331,204	266,733	597,937	7,339	5,457	12,796
27	Sukkur	281,493	227,869	509,362	7,576	6,063	13,649
28	Upper Sind Frontier	134,321	106,293	240,614	2,846	2,109	4,955
	Total for the Presidency ..	10,048,817	9,116,797	19,165,614	354,890	327,020	681,910

IV.

Districts of the Bombay Presidency during the year 1923.

5			6	7	8	9		
Ratio of Births per 1,000 of Population.			Number of males born to every 100 females born.	Excess of Births over Deaths per 1,000 of Population.	Excess of Deaths over Births per 1,000 of Population.	Mean ratio of Births per 1,000 during previous five years.		
Male.	Female.	Total.				Male.	Female.	Total.
26·69	25·01	51·70	108·02	24·83	..	21·47	19·97	41·44
24·19	23·20	47·39	104·24	22·66	..	20·84	19·69	40·53
23·60	22·00	45·60	107·26	16·83	..	18·47	17·20	35·67
15·64	14·99	30·63	104·32	6·18	..	14·18	13·23	27·41
9·27	8·53	17·80	108·07	...	·19	8·75	7·88	16·63
19·06	18·72	38·68	106·65	13·48	..	16·95	15·84	32·79
9·14	8·85	17·99	103·31	...	14·75	10·13	9·39	19·52
26·20	24·72	50·92	106·00	20·61	..	17·17	15·87	33·04
18·34	16·51	34·85	111·09	5·16	..	15·33	14·06	29·39
22·01	20·71	42·72	106·24	6·14	..	18·32	17·21	35·53
20·22	19·23	39·45	105·18	8·15	..	17·51	16·56	34·07
19·54	18·42	37·96	106·06	16·93	..	16·05	14·94	30·99
20·96	19·90	40·86	105·37	11·96	..	19·17	18·27	37·44
17·96	17·15	35·11	104·69	...	·84	17·93	17·22	35·15
20·87	20·13	41·00	103·62	15·56	..	17·58	16·76	34·34
18·66	17·42	36·08	107·13	7·80	..	16·68	15·56	32·24
17·30	15·95	33·25	108·43	4·59	..	18·24	17·16	36·30
22·38	21·99	44·37	101·77	11·65	..	21·36	20·21	41·57
19·89	17·41	37·30	114·25	10·84	..	18·46	16·35	34·81
18·83	17·52	36·35	107·49	15·42	...	19·21	18·25	37·46
19·53	17·86	37·39	109·39	8·94	..	18·23	16·69	34·92
13·07	11·21	24·28	116·63	6·90	..	11·52	10·07	21·59
9·99	7·72	17·71	129·56	5·81	..	9·87	7·57	17·44
12·44	10·21	22·65	121·99	9·68	..	9·03	7·07	16·10
12·44	9·19	21·63	135·47	11·55	..	9·87	7·18	17·05
13·04	9·70	22·74	134·49	10·74	..	10·57	8·30	18·87
14·86	11·92	26·78	124·75	9·53	..	12·12	9·67	21·79
11·82	8·77	20·59	134·94	9·61	..	10·91	8·34	19·25
18·52	17·06	35·58	108·52	9·95	.	16·14	14·31	30·95

ANNUAL FORM No. II.—*Showing the* BIRTHS *and* DEATHS *registered*

1	2	3	4	5	
Serial Number.	Districts.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS	
				Male.	Female.
	Western Registration District.				
1	East Khándesh	4,551	236	545,376	529,746
2	West Khándesh	5,538	113	309,511	303,201
3	Násik	5,877	140	418,510	406,706
4	Thána	3,434	220	388,310	368,589
5	Bombay Suburban	142	1,066	87,567	63,874
6	Kolába	2,169	250	279,350	283,122
7	City of Bombay	24	47,867	751,948	396,867
	Central Registration District.				
8	Ahmednagar	6,610	109	362,947	361,031
9	Poona	5,357	184	500,601	487,060
10	Sholápur	4,556	163	382,374	359,256
11	Sátára	4,910	209	511,288	514,457
12	Ratnágiri	3,989	289	525,085	628,895
	Southern Registration District.				
13	Belgaum	4,611	206	484,615	465,047
14	Dhárwár	4,606	225	528,348	507,891
15	Bijápur	5,707	139	405,148	391,208
16	Kánara	3,946	102	203,950	197,526
	Gujarát Registration District.				
17	Surat	1,651	408	337,276	336,845
18	Broach	1,468	210	158,568	149,143
19	Kaira	1,596	445	379,702	331,203
20	Panch Mahális	1,606	233	193,385	181,446
21	Ahmedabad	3,824	232	473,693	414,231
	Sind Registration District.				
22	Karáchi	11,231	47	302,568	228,094
23	Hyderabad	4,417	128	316,834	250,415
24	Thar and Párkar	13,636	29	221,074	175,283
25	Nawabshah	3,689	107	233,826	184,826
26	Lárkána	5,057	118	331,204	266,733
27	Sukkur	5,612	91	281,493	227,869
28	Upper Sind Frontier	2,664	90	134,321	106,293
	Total for the Presidency ...	122,678	156	10,048,817	9,116,797

in the DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1923.*

	6		7			8
1921).	BIRTHS.		NUMBER OF DEATHS REGISTERED.			Number of Deaths of males to every 100 deaths of females.
Total.	Total Number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.	
1,075,122	55,587	51·70	14,832	14,009	28,841	105·87
612,712	29,035	47·39	7,728	7,419	15,147	104·16
825,216	37,636	45·60	12,463	11,241	23,704	110·87
756,699	23,185	30·63	9,615	8,896	18,511	108·08
151,441	2,696	17·80	1,520	1,205	2,725	126·14
562,472	21,754	38·68	7,311	6,862	14,173	106·54
1,148,815	20,664	17·99	21,299	16,315	37,614	130·49
723,978	36,864	50·92	11,431	10,513	21,944	108·73
987,681	34,420	34·85	15,297	14,023	29,320	109·09
741,630	31,686	42·72	13,705	13,426	27,131	102·08
1,025,695	40,470	39·45	16,088	16,007	32,095	100·51
1,153,980	43,805	37·96	12,273	11,999	24,272	102·28
949,662	38,893	40·56	13,757	13,685	27,442	100·53
1,036,209	36,385	35·11	18,605	18,651	37,256	99·75
796,356	32,552	41·00	10,325	9,934	20,259	103·94
401,476	14,487	36·08	5,854	5,503	11,357	106·38
674,121	22,412	33·25	9,894	9,429	19,323	104·93
307,711	13,656	44·37	5,126	4,943	10,069	103·70
710,905	26,522	37·30	9,951	8,864	18,815	112·26
374,831	13,626	36·35	4,079	3,768	7,847	108·25
887,924	33,201	37·39	13,207	12,052	25,259	109·58
530,657	12,883	24·28	5,194	4,026	9,220	129·01
567,249	10,050	17·71	3,840	2,912	6,752	131·87
396,307	8,975	22·65	2,880	2,258	5,138	127·55
418,652	9,056	21·63	2,372	1,848	4,220	128·35
597,937	12,796	22·74	3,479	2,898	6,377	120·05
509,362	13,649	26·78	4,593	4,199	8,792	109·38
240,614	4,955	20·59	1,526	1,115	2,641	136·86
19,165,614	681,910	35·58	258,244	238,000	496,244	108·51

ANNUAL FORM

1	2	9				
Serial Number.	Districts.	DEATHS PER 1,000 OF				
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.
	Western Registration District.					
1	East Khándesh	·16	·21	3·51	11·53	·82
2	West Khándesh	·29	·78	·08	11·94	·29
3	Násik	·94	·56	·01	12·11	·98
4	Thána	·20	·20	·65	16·83	·33
5	Bombay Suburban	·07	·10	·91	9·00	·88
6	Kolába	·04	·27	·17	15·43	·56
7	City of Bombay	·16	·41	1·16	3·32	2·84
	Central Registration District.					
8	Ahmednagar	2·83	·06	·09	7·04	2·64
9	Poona	2·13	·26	3·21	9·53	1·72
10	Sholápur	1·90	·03	3·97	14·17	2·91
11	Sátára	1·32	·12	7·30	9·93	1·73
12	Ratnágiri	·05	·10	·16	7·53	·79
	Southern Registration District.					
13	Belgaum	·06	·01	6·17	6·20	2·18
14	Dhárwár	·22	·05	7·70	11·12	·93
15	Bijápur	·59	·02	·43	10·77	1·54
16	Kánara	·01	·01	·69	10·95	1·81
	Gujarát Registration District.					
17	Surat	·01	·04	·04	9·70	·84
18	Broach	...	·02	...	14·90	·73
19	Kaira	·00	·08	·00	9·48	1·04
20	Panch Mahális	...	·01	·00	12·37	·44
21	Ahmedabad	·00	·01	·01	13·30	·90
	Sind Registration District.					
22	Karáchi	·01	·08	·90	6·63	·48
23	Hyderabad	...	·03	·01	8·48	·19
24	Thar and Párkar	...	...	...	10·69	·03
25	Nawabshah	...	·02	·02	8·76	·03
26	Lárkána	·00	·00	...	10·02	·04
27	Sukkur	·01	·03	·01	13·78	·13
28	Upper Sind Frontier	...	·03	...	10·18	·02
	Total for the Presidency ...	0·48	0·15	1·76	10·24	1·16

No. II—*concld.*

						10		
Population from						Mean ratio of deaths per 1,000 during previous five years.		
Respiratory Diseases.	Injuries.	All other causes.	All causes.					
			Male.	Female.	Total.	Male.	Female.	Total.
3·12	·22	7·25	27·20	26·45	26·82	45·61	46·87	46·24
2·99	·25	8·10	24·97	24·46	24·72	45·72	47·09	46·40
4·42	·33	9·37	29·78	27·64	28·72	49·16	50·42	49·79
1·87	·45	3·92	24·76	24·14	24·45	39·47	40·35	39·90
2·18	·57	4·18	17·36	18·86	17·99	19·02	20·00	19·43
2·13	·35	6·25	26·17	24·23	25·20	43·31	43·36	43·36
13·27	·73	10·85	28·32	41·11	32·74	43·99	63·71	51·09
5·41	·33	11·91	31·49	29·12	30·31	43·87	43·16	43·51
5·54	·42	7·88	30·56	28·79	29·69	44·03	43·25	43·64
3·23	·43	9·94	35·84	37·37	36·58	48·31	49·70	48·99
2·15	·49	8·26	31·47	31·11	31·30	41·40	42·09	41·74
4·07	·43	7·90	23·37	19·07	21·03	32·36	29·30	30·71
3·12	·42	10·74	28·39	29·43	28·90	35·85	36·91	36·38
3·40	·43	12·10	35·21	36·72	35·95	37·52	39·85	38·68
2·92	·39	8·78	25·48	25·39	25·44	42·48	44·36	43·42
1·76	·49	12·57	28·70	27·86	28·29	36·43	36·52	36·47
10·55	·35	7·13	29·20	27·99	28·66	38·03	37·56	37·80
9·68	·40	6·99	32·33	33·14	32·72	42·87	44·76	43·80
8·78	·53	6·55	26·21	26·76	26·46	39·23	40·60	39·87
3·01	·36	4·74	21·09	20·77	20·93	30·25	30·81	30·52
8·42	·41	5·40	27·88	29·09	28·45	42·08	44·12	43·05
4·17	·30	4·81	17·16	17·63	17·38	29·42	30·84	30·07
1·68	·21	1·30	12·12	11·62	11·90	29·08	29·97	29·50
1·19	·29	·76	13·03	12·89	12·96	30·37	30·83	30·74
·50	·27	·48	10·14	10·00	10·08	28·58	29·53	29·00
·22	·26	·79	11·18	11·51	11·33	27·18	28·04	27·58
·29	·20	2·31	16·31	18·43	17·26	28·90	31·88	30·25
·13	·24	·37	11·36	10·48	10·97	26·09	28·51	27·18
4·40	0·39	7·31	25·70	26·11	25·89	39·01	40·59	39·77

ANNUAL FORM No. III.—DEATHS *registered in the* DISTRICTS *of the*

1	2	3				
No.	Districts.	January.	February.	March.	April.	May.
	Western Registration District.					
1	East Khándesh	2,068	2,227	2,988	2,887	2,847
2	West Khándesh	1,452	1,255	1,515	1,431	1,325
3	Násik	2,206	1,657	2,020	1,933	2,242
4	Thána	2,175	2,669	2,707	1,648	1,419
5	Bombay Suburban	278	191	291	253	239
6	Kolaba	1,531	1,322	1,463	1,206	1,115
7	City of Bombay	3,175	2,986	3,927	3,803	3,308
	Central Registration District.					
8	Ahmednagar	1,719	1,297	1,408	1,389	1,831
9	Poona	2,733	2,150	2,262	2,076	2,116
10	Sholápur	2,067	1,922	1,914	2,187	2,026
11	Sátára	2,039	1,887	1,887	2,127	2,373
12	Ratnágiri	2,425	2,257	2,342	1,980	1,902
	Southern Registration District.					
13	Belgaum	2,262	1,846	2,022	2,163	2,016
14	Dhárwár	2,981	2,433	3,053	2,964	2,587
15	Bijápur	1,985	1,537	1,676	1,862	1,688
16	Kánara	1,313	1,102	1,054	840	844
	Gujarát Registration District.					
17	Surat	2,179	2,258	2,625	1,790	1,591
18	Broach	931	1,016	1,089	966	922
19	Kaira	1,273	1,341	2,186	2,126	1,783
20	Panch Mahális	572	501	839	837	768
21	Ahmedabad	2,167	2,494	3,225	2,899	2,201
	Sind Registration District.					
22	Karáchi	899	783	846	788	790
23	Hyderabad	822	597	703	540	506
24	Thar and Párkar	591	506	643	383	371
25	Nawabshah	480	331	395	352	324
26	Lárkána	777	420	522	461	583
27	Sukkur	738	572	586	647	712
28	Upper Sind Frontier	313	195	219	143	171
	Total for the Presidency ...	44,151	39,752	46,405	42,681	40,600
	Ratio of deaths per 1,000 in each month	2·30	2·07	2·42	2·23	2·12

BOMBAY PRESIDENCY *during each month of the year 1923.*

June.	July.	August.	September	October.	November.	December.	4 Total Deaths registered during the year.	5 No.
1,789	1,407	2,278	3,035	2,959	2,245	2,111	28,841	1
856	739	1,098	1,348	1,444	1,293	1,361	15,147	2
1,663	1,546	2,335	2,201	2,192	1,915	1,794	23,704	3
972	949	1,197	1,087	1,156	1,176	1,356	18,511	4
214	201	245	216	205	191	201	2,725	5
801	976	1,094	1,072	1,105	1,159	1,320	14,173	6
2,728	2,798	3,158	3,048	2,911	2,724	3,048	37,614	7
2,377	1,957	2,712	2,062	2,137	1,632	1,425	21,944	8
1,963	2,824	3,129	2,592	2,722	2,467	2,286	29,320	9
1,602	2,141	3,272	3,154	2,808	2,130	1,908	27,131	10
1,952	2,228	3,241	3,562	4,675	3,539	2,585	32,095	11
1,530	1,846	1,885	1,880	1,970	2,017	2,238	24,272	12
1,746	1,900	2,421	2,963	3,305	2,635	2,163	27,442	13
1,996	2,362	3,662	4,443	4,332	3,424	3,019	37,256	14
1,430	1,524	1,603	1,618	1,818	1,865	1,653	20,259	15
730	896	950	903	806	896	1,023	11,357	16
1,166	1,172	1,331	1,288	1,278	1,325	1,320	19,323	17
692	592	833	851	807	705	665	10,069	18
1,479	1,226	1,478	1,700	1,613	1,251	1,329	18,815	19
540	445	595	718	813	629	590	7,847	20
1,650	1,239	1,810	2,126	1,800	1,754	1,894	25,259	21
605	586	572	706	651	901	1,093	9,220	22
442	347	356	453	519	665	862	6,752	23
252	264	249	319	383	517	660	5,138	24
257	198	209	247	445	492	490	4,220	25
395	381	341	516	585	752	644	6,377	26
641	599	539	645	992	1,024	1,097	8,792	27
161	122	134	160	293	451	279	2,641	28
32,659	33,465	42,727	44,913	46,724	41,804	40,363	4,96,244	
1·70	1·75	2·23	2·34	2·44	2·18	2·11	25·89	

ANNUAL FORM No. IV.—DEATHS *registered according to* AGE *in*

1	2	3	
No.	Districts.	Under 1 year.	
		Male.	Female.
	Western Registration District.		
1	East Khándesh	4,199	3,561
2	West Khándesh	2,407	2,075
3	Násik	3,491	2,889
4	Thána	1,593	1,409
5	Bombay Suburban	248	205
6	Kolába	1,758	1,505
7	City of Bombay	4,529	4,024
	Central Registration District.		
8	Ahmednagar	3,154	2,464
9	Poona	3,386	2,654
10	Sholápur	3,189	2,571
11	Sátára	3,125	2,618
12	Ratnágiri	2,071	1,636
	Southern Registration District.		
13	Belgaum	2,631	2,091
14	Dhárwár	3,201	2,530
15	Bijápur	2,376	1,956
16	Kánara	1,470	1,161
	Gujarat Registration District.		
17	Surat	2,408	2,082
18	Broach	1,359	1,259
19	Kaira	2,393	2,118
20	Panch Mahals	858	799
21	Ahmedabad	3,437	3,095
	Sind Registration District.		
22	Karáchi	1,428	1,123
23	Hyderabad	910	733
24	Thar and Parkar	507	496
25	Nawabshah	543	431
26	Lárkana	793	681
27	Sukkur	1,377	1,207
28	Upper Sind Frontier	382	312
	Total for the Presidency ...	59,228	49,684
	Population according to Census of 1921 ...	287,146	2,82,999
	Ratios per 1,000 living ...	206·26	175·55

NOTE.—Civil population by age groups not being available, rates in Form IV are calculated
population. The rates in other forms

4		5		6		7	
1 and under 5.		5 and under 10.		10 and under 15.		15 and under 20.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
3,071	3,086	808	871	665	707	435	548
1,495	1,585	476	463	267	242	164	268
2,780	2,661	635	581	332	289	220	367
1,316	1,302	555	610	336	306	307	308
217	203	83	55	72	60	66	62
1,245	1,166	324	360	192	200	202	180
2,504	2,710	685	787	683	688	836	710
1,781	1,768	632	584	381	378	286	358
2,717	2,461	854	862	627	631	435	651
2,582	2,646	904	963	599	621	291	446
3,062	3,031	1,266	1,465	781	841	637	979
1,709	1,641	490	530	351	323	339	371
2,531	2,670	1,162	1,271	861	970	420	532
3,264	3,347	1,482	1,593	1,210	1,459	668	817
1,894	2,011	533	629	318	350	194	271
485	545	199	221	157	155	168	224
2,178	2,128	485	466	210	248	185	251
1,325	1,296	213	204	119	88	116	101
2,773	2,561	360	367	209	181	152	142
1,025	952	249	230	124	93	86	94
2,713	2,733	467	472	293	274	370	395
650	575	188	216	200	168	200	224
420	334	162	117	144	103	132	144
236	207	155	114	110	74	117	99
268	239	111	99	94	64	89	89
431	340	182	156	118	79	139	143
890	756	230	200	124	109	112	222
226	211	107	66	43	21	66	31
45,788	45,165	13,997	14,552	9,674	9,718	7,432	8,907
885,160	924,937	1,468,775	1,379,851	1,224,010	969,652	751,226	650,813
51·73	48·83	9·53	10·55	7·90	10·02	9·89	13·69

on the total population figures which include Europeans, Anglo-Indians and Military and Jail are based on the Indian Civil population.

1	2	8	
No.	Districts.	20 and under 30.	
		Male.	Female.
	Western Registration District.		
1	East Khándesh	936	1,153
2	West Khándesh	406	534
3	Násik	658	773
4	Thána	886	1,086
5	Bombay Suburban	152	165
6	Kolába	507	663
7	City of Bombay	3,009	1,927
	Central Registration District.		
8	Ahmednagar	713	842
9	Poona	1,213	1,480
10	Sholápur	909	1,215
11	Sátára	1,532	1,733
12	Ratnágiri	1,056	1,295
	Southern Registration District.		
13	Belgaum	1,012	1,219
14	Dhárwár	1,626	1,972
15	Bijápur	696	840
16	Kánara	551	747
	Gujarat Registration District.		
17	Surat	545	791
18	Broach	250	310
19	Kaira	509	519
20	Panch Mahàls	215	257
21	Ahmedabad	1,033	989
	Sind Registration District.		
22	Karáchi	604	523
23	Hyderabad	382	423
24	Thar and Párkar	344	321
25	Nawábsháh	262	316
26	Lárkána	343	481
27	Sukkur	333	520
28	Upper Sind Frontier	106	137
	Total for the Presidency ...	20,788	23,181
	Population according to Census of 1921 ...	1,781,925	1,656,476
	Ratios per 1,000 living ...	11·67	13·99

No. IV—*concld.*

9		10		11		12		13
30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1,115	971	905	762	846	577	1,852	1,773	1
552	572	522	378	530	375	909	927	2
1,000	910	940	664	843	569	1,564	1,557	3
1,199	1,143	1,216	813	964	703	1,169	1,216	4
192	139	147	103	127	70	216	143	5
665	616	641	462	718	513	1,059	1,197	6
3,081	1,621	2,168	1,001	1,509	755	2,295	2,092	7
936	934	892	667	770	643	1,886	1,875	8
1,537	1,344	1,241	904	1,025	799	2,262	2,387	9
1,073	1,113	908	783	926	770	2,324	2,298	10
1,400	1,269	1,300	1,031	1,263	1,191	1,722	1,849	11
1,063	1,122	936	808	1,108	891	3,150	3,392	12
979	985	1,001	756	1,007	779	2,154	2,422	13
1,621	1,717	1,516	1,199	1,485	1,240	2,532	2,777	14
798	798	744	578	936	657	1,836	1,844	15
677	606	647	456	582	464	918	924	16
685	771	770	578	809	614	1,619	1,600	17
333	372	361	306	390	814	660	693	18
708	597	746	560	748	533	1,349	1,286	19
307	293	313	234	344	226	568	585	20
1,256	1,043	1,108	815	1,099	836	1,431	1,400	21
616	392	443	258	337	165	528	383	22
478	354	437	239	373	186	402	279	23
403	284	360	249	324	169	324	245	24
269	231	253	121	217	105	266	153	25
397	340	351	215	314	184	411	279	26
325	357	319	230	331	174	552	424	27
137	115	143	66	112	50	204	106	28
23,801	21,009	21,328	15,236	20,037	14,442	36,171	36,106	
1,642,370	1,349,143	1,025,082	901,989	615,661	556,308	457,220	480,976	
14·49	15·57	20·81	16·89	32·55	25·96	79·11	75·07	

ANNUAL FORM No. IV (*a*).—*Showing the details of* DEATHS *during the*

No.	Districts.	Deaths — Not exceeding one month.						
		Male.			Female.			Total of columns 5 and 8.
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	
1	2	3	4	5	6	7	8	9
	Western Registration District.							
1	East Khándesh	1,069	763	1,832	892	688	1,580	3,412
2	West Khándesh	644	335	979	539	286	825	1,804
3	Násik	773	607	1,380	645	521	1,166	2,546
4	Thána	493	246	739	425	193	618	1,357
5	Bombay Suburban	62	37	99	60	29	89	188
6	Kolába	605	360	965	498	284	782	1,747
7	City of Bombay	1,035	761	1,796	780	703	1,483	3,279
	Central Registration District.							
8	Ahmednagar	903	484	1,387	655	390	1,045	2,432
9	Poona	717	595	1,312	569	436	1,005	2,317
10	Sholápur	704	569	1,273	574	458	1,032	2,305
11	Sátára	1,165	120	1,285	981	90	1,071	2,356
12	Ratnágiri	560	432	992	399	310	709	1,701
	Southern Registration District.							
13	Belgaum	630	578	1,208	494	468	962	2,170
14	Dhárwár	750	573	1,323	593	452	1,045	2,368
15	Bijápur	502	520	1,022	418	394	812	1,834
16	Kánara	633	385	1,018	479	264	743	1,761
	Gujarát Registration District.							
17	Surat	594	422	1,016	471	358	829	1,845
18	Broach	316	267	583	270	239	509	1,092
19	Kaira	353	419	772	364	354	718	1,490
20	Panch Mahála	180	170	350	160	151	311	661
21	Ahmedabad	450	591	1,041	345	516	861	1,902
	Sind Registration District.							
22	Karáchi	343	233	576	231	207	438	1,014
23	Hyderabad	222	156	378	158	149	307	685
24	Thar and Párkar	169	110	279	143	97	240	519
25	Nawabshah	148	141	289	130	78	208	497
26	Lárkána	207	178	385	180	150	330	715
27	Sukkur	245	306	551	234	238	472	1,023
28	Upper Sind Frontier ...	90	75	165	74	54	128	293
	Total for the Presidency ...	14,562	10,433	24,995	11,761	8,557	20,318	45,313

under one year IN THE DISTRICTS *of the* BOMBAY PRESIDENCY *year 1923.*

UNDER ONE YEAR.

Over one month and not exceeding six months.			Over six months and not exceeding twelve month.			Total male columns 5, 10 and 13.	Total female columns 8, 11 and 14.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
10	11	12	13	14	15	16	17	18	19
1,286	1,061	2,347	1,081	920	2,001	4,199	3,561	7,760	1
930	817	1,747	498	435	934	2,407	2,075	4,482	2
1,320	1,115	2,435	791	608	1,399	3,491	2,889	6,380	3
596	560	1,156	258	231	489	1,593	1,409	3,002	4
77	63	140	72	53	125	248	205	453	5
494	455	949	290	268	567	1,758	1,505	3,263	6
1,240	1,083	2,323	1,493	1,458	2,951	4,529	4,024	8,553	7
1,152	936	2,088	615	483	1,098	3,154	2,464	5,618	8
1,034	856	1,890	1,040	793	1,833	3,386	2,654	6,040	9
1,050	802	1,852	866	737	1,603	3,189	2,571	5,760	10
1,125	981	2,106	715	566	1,281	3,125	2,618	5,743	11
577	513	1,090	502	414	916	2,071	1,686	3,707	12
791	617	1,408	632	512	1,144	2,631	2,091	4,722	13
1,016	812	1,828	862	673	1,535	3,201	2,530	5,731	14
839	688	1,527	515	456	971	2,376	1,956	4,332	15
297	283	580	155	135	290	1,470	1,161	2,631	16
750	684	1,434	642	569	1,211	2,408	2,082	4,490	17
387	391	778	389	359	748	1,359	1,259	2,618	18
919	783	1,702	707	617	1,324	2,398	2,118	4,516	19
273	274	547	235	214	449	858	799	1,657	20
1,156	1,040	2,196	1,240	1,194	2,434	3,437	3,095	6,532	21
446	336	782	406	348	754	1,428	1,122	2,550	22
243	202	445	269	224	513	910	733	1,643	23
131	149	280	97	107	204	507	496	1,003	24
148	122	270	106	101	207	543	431	974	25
224	191	415	184	160	344	793	681	1,474	26
375	320	695	461	415	866	1,377	1,207	2,584	27
123	84	207	94	100	194	382	312	694	28
18,999	16,218	35,217	15,234	13,148	28,382	59,228	49,684	108,912	

ANNUAL FORM No. V.—DEATHS *registered according*
PRESIDENCY *during*

1	2				
		POPULATION			
No.	Districts.	Mahomedans.		Hindus.	
		Male.	Female.	Male.	Female.
	Western Registration District.				
1	East Khandesh	55,176	52,333	484,070	472,143
2	West Khandesh	16,011	15,346	262,850	256,881
3	Nasik	23,805	21,948	388,491	379,357
4	Thana	17,411	14,481	354,764	338,299
5	Bombay Suburban	8,728	5,625	65,684	46,744
6	Kolaba	14,012	14,342	262,562	266,748
7	City of Bombay	126,177	57,210	543,171	289,372
	Central Registration District.				
8	Ahmednagar	18,966	17,870	327,801	325,681
9	Poona	23,591	19,913	465,217	454,887
10	Sholapur	20,467	28,235	346,655	326,392
11	Satara	18,337	17,652	483,403	488,459
12	Ratnagiri	34,410	46,581	486,985	578,134
	Southern Registration District.				
13	Belgaum	40,875	38,943	418,962	403,209
14	Dharwar	73,484	69,553	446,006	430,468
15	Bijapur	48,940	47,185	354,458	342,191
16	Kanara	12,580	13,822	182,587	175,191
	Gujarat Registration District.				
17	Surat	28,071	28,179	279,833	280,147
18	Broach	36,085	33,903	117,003	110,217
19	Kaira	34,193	31,022	328,634	284,525
20	Panch Mahals	13,888	12,797	171,905	161,201
21	Ahmedabad	53,637	45,433	399,443	348,852
	Sind Registration District.				
22	Karachi	213,208	168,986	82,381	53,744
23	Hyderabad	231,341	178,455	87,316	71,811
24	Thar and Parkar	118,596	94,139	98,214	77,812
25	Nawabshah	181,280	139,855	52,448	44,900
26	Larkana	277,501	222,052	53,024	44,130
27	Sukkur	200,273	158,123	79,859	68,329
28	Upper Sind Frontier	120,494	95,783	13,561	10,294
	Total for the Presidency ...	2,071,538	1,689,766	7,637,589	7,130,018

N.B.—This and all the other Statements refer to Indians only and not to Europeans. "Hindus"
Note.—Population by classes in Form V includes Jail figures.

to CLASSES *and* SEX, *in the Districts of the* BOMBAY *the year 1923.*

3

ACCORDING TO CENSUS OF 1921.

Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female	Male.	Female.	Male.	Female.	
4,708	3,992	625	518	261	178	536	582	545,376	529,746	1,075,122
2,255	1,832	543	445	120	70	28,244	28,649	309,511	303,201	612,712
4,076	3,445	1,577	1,524	509	400	51	32	418,510	406,706	825,216
1,524	744	13,339	13,112	1,532	1,907	159	150	388,310	368,589	756,899
1,354	632	10,471	9,608	1,246	1,199	84	66	87,567	63,874	151,441
1,153	487	622	482	177	139	837	925	279,350	283,123	562,472
17,587	6,297	32,198	16,096	27,948	24,286	5,505	3,718	751,948	396,867	1,148,815
6,867	6,171	10,967	11,185	90	90	62	34	364,753	361,031	725,784
6,705	4,984	5,109	5,448	1,557	1,510	454	448	500,601	467,080	967,681
4,015	3,413	1,067	1,055	170	161	...	...	382,374	359,256	741,630
8,104	7,197	1,102	886	261	237	31	26	511,238	514,457	1,025,695
819	821	3,078	3,339	22	14	16	11	525,085	628,895	1,153,980
21,868	19,967	2,963	2,840	59	62	22	7	484,615	465,047	949,662
5,741	4,809	3,321	2,888	129	121	45	24	528,348	507,861	1,036,209
1,675	1,320	537	526	19	11	...	...	405,148	391,208	796,356
595	519	8,051	7,994	9	4	1	...	203,950	197,526	401,476
5,427	4,817	948	680	5,037	6,014	17,960	17,008	337,276	336,845	674,121
1,758	1,497	1,406	1,178	1,045	1,176	1,271	1,172	158,568	149,143	307,711
3,210	3,128	13,276	12,236	54	40	335	252	379,702	331,203	710,905
956	857	1,626	1,555	127	113	4,883	4,923	193,385	181,446	374,831
18,353	17,094	2,424	1,947	861	802	174	173	473,693	414,231	887,924
635	483	3,611	2,348	1,396	1,323	1,899	1,219	302,563	228,094	530,657
45	37	127	87	34	23	14	8	316,834	250,415	567,249
150	118	43	16	4	4	4,067	3,144	221,074	175,233	396,307
1	...	19	13	3	...	75	58	233,826	184,826	418,652
...	...	27	9	2	...	650	542	331,204	266,733	597,937
8	8	161	117	67	56	1,836	1,252	281,493	227,869	509,362
29	20	4	6	...	...	233	190	134,321	106,293	240,614
119,619	94,709	119,242	98,138	42,739	39,940	69,444	64,613	10,050,623	9,116,797	19,167,420

include Hindus of all castes. "Other Classes" include Buddhists, Sikhs, Jews and all others.

ANNUAL FORM

1	2	Mahomedans.		Hindus.	
No.	Districts.	Male.	Female.	Male.	Female.
	Western Registration District.				
1	East Khandesh	971	1,001	13,851	12,995
2	West Khandesh	308	322	7,408	7,091
3	Nasik	747	778	11,681	10,440
4	Thana	425	356	8,911	8,204
5	Bombay Suburban	160	160	1,130	848
6	Kolaba	378	349	6,693	6,475
7	City of Bombay	4,745	3,384	14,360	11,156
	Central Registration District.				
8	Ahmednagar	523	460	10,845	9,991
9	Poona	744	689	14,463	13,236
10	Sholapur	976	1,100	12,665	12,275
11	Satara	665	612	15,335	15,306
12	Ratnagiri	855	838	11,341	11,087
	Southern Registration District.				
13	Belgaum	1,205	1,180	12,108	12,071
14	Dharwar	2,810	2,814	15,543	15,616
15	Bijapur	1,149	1,174	9,143	8,727
16	Kanara	323	326	5,314	4,974
	Gujarat Registration District.				
17	Surat	601	656	8,927	8,391
18	Broach	955	932	4,028	3,890
19	Kaira	1,003	812	8,782	7,887
20	Panch Mahals	270	215	3,709	3,477
21	Ahmedabad	1,520	1,428	11,248	10,216
	Sind Registration District.				
22	Karachi	3,102	2,359	1,992	1,586
23	Hyderabad	2,320	1,653	1,516	1,251
24	Thar and Parkar	1,506	1,240	1,366	1,011
25	Nawabshah	1,656	1,236	709	603
26	Larkana	2,652	2,197	823	696
27	Sukkur	2,510	2,135	2,073	2,055
28	Upper Sind Frontier	1,228	825	293	282
	Total of the Presidency ...	36,307	31,261	216,457	201,837

No. V—*contd.*

4

NUMBER OF DEATHS REGISTERED.

Jains.		Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
3	3	3	6	1	...	3	4	14,832	14,009	28,841
4	1	7	4	1	1	...	...	7,728	7,419	15,147
7	7	21	10	3	4	4	2	12,463	11,241	23,704
...	1	252	269	23	29	4	7	9,615	8,896	18,511
4	2	216	186	8	5	2	4	1,520	1,205	2,725
1	2	12	18	4	...	23	18	7,311	6,862	14,173
507	337	894	724	660	599	133	115	21,299	16,315	37,614
6	9	57	53	...	...	...	...	11,431	10,513	21,944
6	6	48	67	14	14	22	11	15,297	14,023	29,320
52	49	2	...	...	2	...	...	13,705	13,426	27,131
79	76	5	10	2	1	2	2	16,088	16,007	32,095
9	9	68	65	...	...	...	...	12,273	11,999	24,272
405	400	38	34	1	...	...	...	13,757	13,685	27,442
192	183	59	38	1	...	...	...	18,605	18,651	37,256
21	22	11	11	1	...	...	...	10,325	9,934	20,259
20	9	197	194	...	...	...	...	5,854	5,503	11,357
89	105	19	12	126	135	132	130	9,894	9,429	19,323
29	19	5	5	25	24	84	73	5,126	4,943	10,069
65	54	100	109	1	...	...	2	9,951	8,864	18,815
12	9	11	8	2	...	75	59	4,079	3,768	7,847
376	358	44	36	17	12	2	2	13,207	12,052	25,259
...	...	64	49	20	16	16	16	5,194	4,026	9,220
1	2	1	2	...	...	2	4	3,840	2,912	6,752
1	5	2	...	...	...	5	2	2,880	2,258	5,138
...	...	...	...	...	...	7	9	2,372	1,848	4,220
...	...	...	...	...	...	4	5	3,479	2,898	6,377
...	1	3	1	...	...	7	7	4,593	4,199	8,792
...	...	...	...	...	...	5	8	1,526	1,115	2,641
1,899	1,669	2,139	1,911	910	842	532	480	258,244	238,000	496,244

1	2						
No.	Districts.	Mahomedans.		Hindus.		Jains.	
		Male.	Female.	Male.	Female.	Male.	Female.
	Western Registration District.						
1	East Khandesh	17·60	19·12	28·61	27·52	·63	·75
2	West Khandesh	19·23	20·98	28·18	27·60	1·77	·54
3	Nasik	31·37	35·44	30·06	27·52	1·71	2·32
4	Thana	24·41	26·66	25·12	24·25	...	1·34
5	Bombay Suburban	18·33	28·44	17·20	18·14	2·95	3·16
6	Kolaba	26·97	24·33	26·25	24·27	·86	4·11
7	City of Bombay	37·61	59·15	26·44	38·57	28·83	53·52
	Central Registration District.						
8	Ahmednagar	27·58	25·74	33·08	30·68	0·87	1·46
9	Poona	31·54	34·60	31·09	29·10	0·89	1·20
10	Sholapur	32·03	38·96	36·53	37·61	15·44	14·36
11	Satara	36·27	34·67	31·72	31·34	9·75	10·56
12	Ratnagiri	24·85	17·99	23·29	19·02	10·99	10·96
	Southern Registration District.						
13	Belgaum	29·48	30·30	28·90	29·94	18·52	20·01
14	Dharwar	38·24	40·46	34·85	36·28	33·44	38·05
15	Bijapur	23·48	24·88	25·79	25·50	12·54	16·67
16	Kanara	25·68	23·59	29·06	28·39	33·61	17·34
	Gujarat Registration District.						
17	Surat	21·41	23·28	31·90	29·95	16·40	21·80
18	Broach	26·47	27·49	34·43	35·29	16·50	12·69
19	Kaira	29·33	26·17	26·72	27·72	20·25	17·26
20	Panch Mahals	19·44	16·80	21·58	21·57	12·55	10·50
21	Ahmedabad	28·34	31·43	28·16	29·28	20·49	20·94
	Sind Registration District.						
22	Karachi	14·55	13·96	24·18	29·51	...	...
23	Hyderabad	10·03	9·26	17·36	17·42	22·22	54·05
24	Thar and Parkar	12·70	13·17	13·91	12·99	6·66	42·37
25	Nawabshah	9·14	8·84	13·51	13·43	...	...
26	Larkana	9·55	9·89	15·52	15·77	...	...
27	Sukkur	12·53	13·50	25·96	30·07	...	125·00
28	Upper Sind Frontier	10·19	8·61	21·61	27·39	...	...
	Total of the Presidency ...	17·53	18·50	28·34	28·31	15·87	17·62

No. V—*concld.*

5

RATIO OF DEATHS PER 1,000 OF POPULATION.

Christians.		Parsis.		Other Classes.		Total.		Total.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
4·80	11·58	3·60	...	5·60	6·87	27·20	26·45	26·82
12·89	7·34	8·33	14·28	...	...	24·93	24·47	24·72
13·31	6·36	5·89	10·00	78·43	62·50	29·78	27·64	28·72
18·89	20·51	15·01	15·21	25·16	46·67	24·74	24·13	24·45
20·50	19·36	6·42	4·17	23·81	60·60	17·35	18·86	17·99
19·29	37·34	22·60	...	27·48	19·46	26·17	24·24	25·20
27·77	44·98	3·6	24·66	24·16	30·93	28·33	41·11	32·74
5·20	4·74	...	...	...	...	31·49	29·12	30·31
9·40	12·30	8·99	9·27	48·46	24·55	30·56	28·79	29·69
1·87	...	...	12·42	...	...	35·84	37·37	36·58
4·54	11·28	7·66	4·22	64·52	76·92	31·47	31·11	31·30
22·09	19·47	...	...	...	...	23·37	19·07	21·03
12·63	11·85	16·95	...	...	...	28·39	29·43	28·90
17·77	13·16	7·75	...	...	...	35·21	36·72	35·95
20·48	20·91	52·63	...	...	...	25·48	25·39	25·44
24·47	24·27	...	...	...	...	28·70	27·86	28·29
20·04	17·65	25·01	22·45	7·35	7·64	29·20	27·99	28·66
3·56	4·24	23·92	20·41	66·09	62·29	32·33	33·14	32·74
7·53	8·91	18·52	·00	·00	7·94	26·21	26·76	26·46
6·77	5·14	15·75	·00	15·36	11·98	21·09	20·77	20·93
18·15	18·49	19·74	14·96	11·49	11·56	27·88	29·09	28·45
17·72	20·96	15·04	12·09	7·90	13·13	17·16	17·63	17·38
7·87	22·99	...	...	142·84	500·00	12·12	11·62	11·90
46·51	...	...	...	1·23	·63	13·03	12·31	12·91
...	...	...	...	93·33	155·17	10·27	10·00	10·08
...	...	...	...	6·15	9·22	11·18	11·51	11·33
18·63	8·55	...	...	3·81	5·58	16·31	18·43	17·26
...	...	...	...	21·46	42·71	11·36	10·48	10·97
17·94	19·47	21·29	21·08	7·66	7·43	25·70	26·11	25·89

ANNUAL FORM No. VI.—DEATHS *registered from* BOMBAY PRESIDENCY *Details regarding Births*

1	2	3	4			
			Births.			
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.
	A.—DISTRICTS, EXCLUDING TOWNS.					
	Western Registration District.					
1	East Khándesh	918,037	25,915	24,390	50,305	54·80
2	West Khándesh	568,809	14,038	13,473	27,511	48·36
3	Násik	705,858	17,648	16,676	34,324	48·63
4	Thána	694,658	11,048	10,638	21,686	31·23
5	Bombay Suburban	91,943	883	820	1,703	18·52
6	Kolába	533,270	10,918	10,260	21,178	39·71
	Central Registration District.					
7	Ahmednagar	667,106	18,187	17,191	35,378	53·03
8	Poona	770,334	16,283	14,684	30,967	40·20
9	Sholápur	574,999	13,536	12,784	26,320	45·77
10	Sátára	964,847	20,155	19,195	39,350	40·78
11	Ratnágiri	1,083,350	21,527	20,312	41,839	38·62
	Southern Registration District.					
12	Belgáum	871,163	18,729	17,766	36,495	41·89
13	Dhárwár	870,565	16,183	15,418	31,601	36·30
14	Bijápur	717,798	15,101	14,669	29,770	41·47
15	Kánara	350,246	6,701	6,190	12,891	36·81
	Gujarat Registration District.					
16	Surat	526,465	9,694	8,966	18,660	35·44
17	Broach	243,112	5,476	5,335	10,811	44·47
18	Káira	604,528	11,955	10,385	22,340	36·95
19	Panch Mahals	331,791	6,555	6,088	12,653	38·14
20	Ahmedabad	568,759	10,724	9,656	20,380	35·83
	Sind Registration District.					
21	Karáchi	307,576	2,151	1,536	3,687	11·99
22	Hyderabad	480,469	3,919	2,863	6,782	14·12
23	Thar and Párkar	386,343	4,857	3,976	8,833	22·86
24	Nawábsháh	402,915	5,078	3,757	8,835	21·93
25	Larkana	562,636	6,773	4,958	11,731	20·85
26	Sukkur	394,216	5,643	4,489	10,132	31·92
27	Upper Sind Frontier...	230,036	2,723	2,017	4,740	20·61
	Total of Districts ...	15,421,829	302,410	278,492	580,902	37·67

different causes and in the DISTRICTS *and* TOWNS *of the during the year 1923.*
also Shewn, Column 4.

5	6	7		9	10	11 INJURIES—*(continued on next page).*	
Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
						Male.	Female
134	197	2,704	11,257	744	2,818	3	6
148	275	44	7,133	133	1,606	6	3
457	149	6	9,186	649	3,005	3	...
88	113	329	12,311	175	1,036	18	11
9	10	95	981	79	146	3	2
21	136	98	8,408	291	1,128	5	5
2,039	42	58	4,962	1,850	3,566	6	4
1,896	146	1,400	8,397	1,345	3,214	5	2
1,151	8	2,565	7,255	1,704	1,651	6	3
1,259	60	6,691	9,941	1,724	1,969	7	7
53	110	185	8,341	843	4,416	5	5
23	4	5,803	5,533	1,955	2,664	17	9
202	53	6,119	10,242	775	2,484	31	23
468	18	143	8,070	1,129	1,974	43	11
5	5	274	4,193	649	598	8	5
6	18	27	5,843	284	5,572	7	11
...	4	.....	3,980	167	2,325	1	4
...	15	.....	5,211	597	5,402	10	14
...	2	.....	4,103	161	1,111	4	4
1	7	.....	8,708	363	2,647	8	7
...	...	20	2,156	7	148	4	...
...	...	1	4,231	16	195	2	...
...	...	.....	4,094	9	401	...	1
...	9	2	3,540	10	176	7	3
...	...	.....	5,139	7	58	4	5
3	4	.....	5,346	6	50	6	2
...	7	.....	2,297	3	23	5	9
7,963	1,392	26,564	170,858	15,674	50,386	224	156

1	2	11				12	13
		INJURIES—*contd.*					
No.	Districts and Towns.	Wounding or Accident.	Snakebite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.
	A.—DISTRICTS EXCLUDING TOWNS —*concld.*						
	Western Registration District.						
1	East Khandesh ...	154	29	11	203	6,671	24,928
2	West Khandesh ...	78	47	3	137	4,613	14,089
3	Nasik ...	168	56	4	226	6,930	20,607
4	Thana ...	167	117	3	316	2,604	16,972
5	Bombay Suburban ...	54	11	1	71	296	1,687
6	Kolaba ...	119	55	1	185	3,345	13,612
	Central Registration District.						
7	Ahmednagar ...	193	30	5	238	8,267	21,022
8	Poona ...	269	39	16	331	5,714	22,443
9	Sholapur ...	199	23	9	240	5,638	20,212
10	Satara ...	346	91	22	473	7,976	30,093
11	Ratnagiri ...	198	255	1	464	8,572	22,984
	Southern Registration District.						
12	Belgaum ...	297	35	6	364	9,591	25,937
13	Dharwar ...	274	38	9	375	10,628	30,878
14	Bijapur ...	198	20	5	277	5,913	17,992
15	Kanara ...	145	20	1	179	4,638	10,541
	Gujarat Registration District.						
16	Surat ...	125	26	14	183	3,146	15,079
17	Broach ...	65	22	1	93	1,528	8,097
18	Kaira ...	208	68	23	323	3,820	15,368
19	Panch Mahals ...	70	35	12	134	1,656	7,167
20	Ahmedabad ...	132	63	22	232	1,939	13,897
	Sind Registration District.						
21	Karachi ...	32	16	...	52	158	2,541
22	Hyderabad ...	40	40	4	86	194	4,723
23	Thar and Parkar ...	47	61	...	109	277	4,893
24	Nawabshah ...	67	31	...	108	197	4,042
25	Larkana ...	93	26	...	130	217	5,551
26	Sukkur ...	57	15	1	81	255	5,745
27	Upper Sind Frontier ...	40	4	...	58	45	2,433
	Total of Districts ...	3,889	1,275	174	5,668	105,028	383,533

No. VI—*continued.*

14

RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-Pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
								For the year.	Mean of previous five years.
·14	·21	2·91	12·12	·80	3·03	·22	7·40	26·83	47·67
·26	·48	·08	12·54	·23	2·82	·24	8·11	24·77	46·87
·65	·21	·01	13·01	·92	4·26	·32	9·82	29·19	51·13
·13	·16	·47	17·72	·25	1·49	·46	3·75	24·42	40·48
·10	·11	1·03	10·67	·86	1·59	·77	3·22	18·35	19·89
·04	·25	·18	15·77	·55	2·12	·35	6 27	25·53	44·21
3·06	·06	·09	7·43	2·77	5·35	·36	12·39	31·51	44·19
2·46	·19	1·81	10·90	1·75	4·18	·43	7·41	29·13	43·20
2·00	·01	4·46	12·62	2·96	2·87	·42	9·81	35·15	46·16
1·31	·06	6·94	10·30	1·78	2·04	·49	8·27	31·19	42·36
·05	·10	·17	7·70	·78	4·08	·43	7·91	21·22	30·94
·03	·00	6·66	6·35	2·24	3·06	·42	11·01	29·77	36·78
·23	·06	7·03	11·76	·89	2·85	·43	12·21	35·47	38·87
·65	·03	·20	11·24	1·57	2·75	·39	8·24	25·07	44·01
·02	·02	·78	11·97	1·85	1·71	·51	13·24	30·10	38·32
·01	·03	·05	11·09	·54	10·59	·35	5·98	28·64	39·16
·00	·02	·00	16·37	·69	9·56	·38	6·28	33·30	44·66
·00	·02	·00	8·62	·99	8·94	·53	6·32	25·42	40·95
·00	·01	·00	12·37	·48	3·35	·40	4·99	21·60	30·61
·00	·01	·00	15·31	·63	4·66	·41	3·41	24·43	40·43
...	...	·07	7·01	·02	·48	·17	·51	8·26	21·76
...	...	·00	8·80	·03	·41	·18	·40	9·52	28·63
...	...	...	10·60	·02	1·05	·28	·71	12·66	30·35
...	·02	·00	8·79	·02	·44	·27	·49	10·03	29·12
...	...	...	9·13	·01	·10	·23	·39	9·86	27·00
0·01	·01	...	13·56	·02	·13	·21	·65	14·58	28·96
...	·01	...	9·99	·01	·10	·25	·19	10·57	27·10
0·51	0·09	1·72	11·08	1·02	3·27	0·37	6·81	24·87	39·00

1	2	3	4			
			Births.			
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.
	B.—Towns.					
	East Khándesh District.					
1	Jalgaon	23,696	347	278	625	26·42
2	Bhusáwal	24,933	369	324	693	27·79
3	Chopda	16,930	277	260	537	31·72
4	Dharangaon	14,824	247	217	464	31·30
5	Párola	12,079	303	260	563	46·60
6	Amalner	17,068	154	131	285	16·69
7	Erandol	12,489	230	261	491	40·11
8	Nasirabad	12,188	323	295	618	50·70
9	Chálisgaon	11,990	256	225	481	40·12
10	Yawal	10,888	275	250	525	48·22
	West Khandesh District.					
11	Dhulia	30,061	547	502	1,049	34·89
12	Nandurbár	13,842	234	241	475	34·31
	Nasik District.					
13	Násik	42,715	763	653	1,416	33·15
14	Yeola	13,911	261	160	421	30·26
15	Málegaon	23,711	417	372	789	33·27
16	Igatpuri	9,977	169	121	290	29·06
17	Manmád	11,866	121	91	212	17·86
18	Trimbak	4,538	65	58	123	27·10
19	Deoláli Cantonment	12,640	34	27	61	4·82
	Thana District.					
20	Thána	23,116	191	197	388	17·54
21	Bhiwandi	12,188	210	170	380	31·18
22	Kalyán	17,573	217	197	414	23·56
23	Bassein	10,364	172	145	317	30·58
	Bombay Suburban District.					
24	Bándra	28,738	326	309	635	22·09
25	Kurla	26,059	191	154	345	13·24
26	Santa Cruz Cantonment	4,701	4	9	13	2·76

No. VI—*continued.*

5	6	7	8	9	10	11 Injuries (*continued on next page*).	
						Suicide.	
Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	espiratory Diseases.	Male.	Female.
4	1	3	130	19	49	...	...
1	4	4	230	10	62	...	...
...	1	32	111	7	44	...	...
11	4	424	67	32	49	...	...
1	8	184	115	4	58	...	...
...	10	199	62	11	59	1	...
9	...	182	77	8	59	...	...
...	...	42	106	28	81	...	...
10	5	...	140	7	34	...	...
...	...	2	95	9	45	...	...
...	177	6	98	38	148	...	1
26	23	...	89	11	77	...	...
5	14	3	237	94	351	3	1
30	3	2	234	20	102	...	1
272	298	...	223	23	58	...	...
1	...	...	33	6	46	...	...
6	...	...	55	5	32	...	...
...	1	...	23	4	24	...	...
...	...	...	2	4	35	..	...
1	...	63	219	18	86	1	1
9	13	33	41	40	118	...	...
49	19	37	83	7	139	1	...
2	5	34	84	13	38	...	...
2	4	40	44	36	145	...	...
...	1	4	335	33	38	...	...
...	..	...	2	...	1	...	...

No	Districts and Towns.	Injuries—*contd.*				All other causes.	Total deaths from all causes.
		Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.		
	B.—Towns—*contd.*						
	East Khandesh District.						
1	Jalgaon ...	6	...	...	6	145	357
2	Bhusawal ...	4	1	...	5	109	425
3	Chopda ...	3	...	...	3	83	281
4	Dharangaon ...	4	...	1	5	112	704
5	Parola ...	5	...	...	5	95	470
6	Amalner ...	3	...	1	5	74	420
7	Erandol ...	5	...	...	5	93	433
8	Nasirabad ...	...	...	...	...	113	370
9	Chalisgaon ...	2	...	...	2	46	244
10	Yawal ...	2	...	...	2	56	209
	West Khandesh District.						
11	Dhulia ...	10	1	1	13	240	715
12	Nandurbar ...	2	1	...	3	112	343
	Nasik District.						
13	Nasik ...	19	...	3	26	486	1,216
14	Yeola ...	3	...	2	6	46	443
15	Malegaon ...	4	...	...	4	149	1,027
16	Igatpuri ...	4	...	...	4	39	129
17	Manmad ...	5	...	...	5	18	121
18	Trimbak ...	2	...	1	3	25	80
19	Deolali Cantonment ...	...	...	...	...	40	81
	Thana District.						
20	Thana ...	9	...	...	11	90	488
21	Bhiwandi ...	4	1	...	5	134	393
22	Kalyan ...	5	...	...	6	64	404
23	Bassein ...	4	...	...	4	74	254
	Bombay Suburban District.						
24	Bandra ...	5	2	...	7	267	545
25	Kurla ...	7	1	...	8	70	489
26	Santa Cruz Cantonment ...	...	...	...	...	1	4

No. VI—*continued.*

14

RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.
·16	·04	·12	5·47	·80	2·07	·25	6·10	15·01	33·17
·04	·16	·16	9·22	·40	2·49	·20	4·37	17·04	31·53
...	·06	1·89	6·56	·41	2·60	·18	4·90	16·60	35·46
·74	·27	28·60	4·52	2·16	3·31	·34	7·55	47·49	36·23
·08	·66	15·23	9·53	·33	4·80	·41	7·87	38·91	40·78
...	·58	11·65	3·63	·64	3·45	·28	4·38	24·61	33·42
·73	...	14·57	6·16	·64	4·72	·40	7·45	34·67	48·08
...	...	3·45	8·70	2·29	6·64	...	9·27	30·35	44·08
·83	·42	...	11·67	·59	2·83	·17	3·84	20·35	33·46
...	...	·18	8·71	·82	4·14	·18	5·14	19·19	Not available.
...	5·89	·20	3·26	1·10	4·92	·43	7·98	23·78	40·89
2·02	1·66	...	6·43	·79	5·56	·22	8·09	24·78	39·29
·12	·33	·07	5·55	2·20	8·22	·61	11·37	28·47	45·01
2·16	·22	·14	18·82	1·44	7·33	·42	3·31	31·84	45·05
11·47	12·57	...	9·40	·97	2·45	·17	6·28	43·31	37·92
·10	...	...	3·31	·60	4·61	·40	3·90	12·92	24·15
·50	...	...	4·63	·42	2·69	·42	1·52	10·19	28·64
...	·22	...	5·07	·88	5·29	·65	5·51	17·63	37·81
...	...	...	·15	·31	2·76	...	3·19	6·41	47·49
·04	...	2·85	9·90	·81	3·88	·50	4·07	22·05	45·54
·74	1·07	2·71	3·36	3·28	9·68	·41	10·99	32·24	32·42
2·79	1·08	2·11	4·72	·40	7·91	·34	3·64	22·99	29·49
·19	·48	3·23	8·10	1·25	3·67	·39	7·14	24·50	33·85
·07	·14	1·39	1·54	1·25	5·04	·24	9·29	18·96	31·11
...	·04	·15	12·87	1·26	1·46	·31	2·68	18·77	31·18
...	...	...	·43	...	·21	...	·21	·85	Not available

1	2	3	4			
			Births.			
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.
	B.—Towns—*contd.*					
	Kolaba District.					
27	Alibág	5,253	53	45	98	18·65
28	Panwel	8,622	84	78	162	13·79
29	Mahád	7,192	90	88	178	24·75
30	Uran	8,135	82	56	138	16·96
31	City of Bombay	1,148,815	10,500	10,164	20,664	17·99
	Ahmednagar District.					
32	Ahmednagar	33,138	375	355	730	22·03
33	Sangamner	12,737	220	195	415	32·58
34	Ahmednagar Cantonment	10,997	187	154	341	31·01
	Poona District.					
35	Poona City	133,122	1,156	1,023	2,179	16·37
36	Poona Suburban	13,971	96	67	163	11·67
37	Bárámati	11,905	149	148	297	24·95
38	Khed	7,013	89	92	181	25·81
39	Lonávla	10,471	125	111	236	22·54
40	Junnár	7,376	105	82	187	25·35
41	Poona Cantonment	25,498	56	36	92	3·61
42	Kirkee do.	7,991	55	63	118	14·77
	Sholapur District.					
43	Sholápur	119,347	2,095	1,927	4,022	33·70
44	Bársi	22,074	326	309	635	28·77
45	Pandharpur	25,210	365	344	709	28·12
	Satara District.					
46	Sátara	22,454	98	92	190	8·46
47	Wái	10,208	149	108	257	25·18
48	Karád	11,255	83	93	176	15·64
49	Ashta	9,016	134	137	271	30·06
50	Islámpur	7,915	125	101	226	28·55
	Ratnagiri District.					
51	Ratnágiri	18,286	181	191	372	20·34
52	Vengurla	19,126	365	345	710	37·12
53	Málwan	22,213	313	279	592	26·65
54	Chiplun	11,005	161	131	292	26·53

No. VI—*continued.*

5	6	7	8	9	10	11 INJURIES. (*continued on next page*).	
						Suicide.	
Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Male.	Female.
...	10	...	68	2	22	...	...
...	...	...	106	4	15	...	...
...	3	1	34	12	18	...	...
...	2	...	62	7	17	...	...
186	475	1,327	3,813	3,257	15,248	71	26
3	1	8	41	26	259	1	...
...	...	...	56	21	36	...	...
2	...	...	38	17	54	...	...
49	75	702	569	243	1,827	...	2
8	2	23	101	9	45	...	...
94	1	...	109	17	20	...	...
...	...	24	33	8	40	...	...
1	30	8	64	13	88	...	...
47	6	1	44	7	39	...	...
3	...	27	96	23	116	...	1
...	...	...	7	30	87	...	1
37	11	223	2,094	278	562	2	2
1	5	147	596	45	41	1	...
220	1	9	566	132	138	...	...
23	48	695	112	14	101	...	...
63	14	32	37	14	62	...	...
...	4	67	28	11	11	...	...
...	...	...	27	6	8	...	...
11	...	1	43	7	48	...	...
...	...	...	39	10	59	...	...
...	1	...	114	44	92	...	...
1	...	...	109	11	82	...	1
2	1	...	88	4	48	...	...

1	2	Injuries—*contd.*				12	13
No.	Districts and Towns.	Wounding or Accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.
	B.—Towns—*contd.*						
	Kolaba District.						
27	Alibag ...	...	...	...	...	29	131
28	Panwel ...	2	...	...	2	30	157
29	Mahad ...	2	...	1	3	73	144
30	Uran ...	4	...	...	4	37	129
31	City of Bombay ...	741	5	...	843	12,465	37,614
	Ahmednagar District.						
32	Ahmednagar ...	1	...	...	2	204	544
33	Sangamner ...	2	...	...	2	102	217
34	Ahmednagar Cantonment ...	...	...	...	...	50	161
	Poona District.						
35	Poona City ...	34	3	11	50	1,611	5,126
36	Poona Suburban ...	...	...	...	...	69	257
37	Baramati ...	2	...	...	2	82	325
38	Khed ...	2	...	...	2	54	156
39	Lonavla ...	10	1	2	13	71	283
40	Junnar ...	4	1	2	7	31	182
41	Poona Cantonment ...	3	...	...	4	106	375
42	Kirkee do. ...	3	...	...	4	45	173
	Sholapur District.						
43	Sholapur ...	44	2	1	51	1,216	4,467
44	Barsi ...	17	1	1	20	167	1,022
45	Pandharpur ...	12	...	...	12	352	1,430
	Satara District.						
46	Satara ...	10	1	...	11	238	1,242
47	Wai ...	3	3	...	6	72	300
48	Karad ...	3	...	1	4	63	188
49	Ashta ...	1	...	2	3	56	102
50	Islampur ...	2	...	...	2	58	170
	Ratnagiri District.						
51	Ratnagiri ...	5	3	...	8	92	208
52	Vengurla ...	5	1	...	6	223	485
53	Malwan ...	11	4	3	19	190	412
54	Chiplun ...	3	...	...	3	37	188

No. VI—*continued.*

14

RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-Pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.
...	1·90	...	12·95	·38	4·19	...	5·52	24·94	38·13
...	...	...	12·29	·47	1·74	·23	3·48	18·21	25·43
...	·42	·14	4·72	1·67	2·50	·42	10·15	20·02	25·15
...	·25	...	7·62	·86	2·09	·49	4·55	15·86	21·92
·16	·41	1·16	3·32	2·84	13·27	·73	10·85	32·74	51·09
·09	·03	·24	1·24	·78	7·82	·06	6·16	16·42	37·18
...	...	...	4·40	1·65	2·82	·16	8·01	17·04	26·40
·18	...	...	3·45	1·55	4·91	...	4·55	14·64	34·28
·37	·56	5·27	4·28	1·82	13·72	·38	12·11	38·51	55·99
·57	·14	1·65	7·23	·64	3·23	...	4·94	18·40	23·12
7·90	·08	...	9·15	1·43	1·69	·17	6·88	27·30	40·68
...	...	3·42	4·71	·43	5·70	·28	7·70	22·24	27·48
·10	2·87	·77	6·12	1·23	7·03	1·23	6·78	27·03	34·12
6·37	·81	·14	5·96	·95	5·29	·95	4·20	24·67	25·51
·12	...	1·06	3·76	·91	4·54	·16	4·16	14·71	16·74
...	...	...	·88	3·75	10·89	·50	5·63	21·65	39·69
·31	·09	1·87	17·54	2·29	4·71	·43	10·19	37·43	70·36
·04	·23	6·66	27·00	2·04	1·85	·91	7·56	46·29	52·51
3·73	·04	·36	22·45	5·24	5·47	·47	13·96	56·72	56·61
1·02	2·13	30·95	4·97	·65	4·49	·50	10·60	55·31	38·19
6·17	1·37	3·13	3·63	1·37	6·07	·59	7·06	29·39	32·76
...	·35	5·95	2·48	·98	·98	·36	5·60	16·70	19·17
...	...	...	2·99	·67	·89	·33	6·43	11·31	26·73
1·39	...	·13	5·43	·89	6·06	·25	7·33	21·48	29·61
...	...	...	2·13	·55	3·22	·44	5·03	11·37	23·74
...	·05	...	5·96	2·30	4·81	·31	11·92	25·35	31·09
·04	...	...	4·91	·50	3·69	·86	8·55	18·55	25·44
·18	·09	...	8·00	·36	4·36	·27	3·36	16·62	26·96

No.	2 Districts and Towns.	3 Population according to Census of 1921.	4 Births. Male.	Female.	Total.	Birth rate.
	B.—Towns—*contd.*					
	Belgaum District.					
55	Belgaum ...	36,214	519	487	1,006	27·78
56	Gokak ...	9,989	213	193	406	40·64
57	Athni ...	13,538	238	221	459	33·91
58	Nipani ...	11,878	201	204	405	32·07
59	Belgaum Cantonment ...	6,880	9	23	32	4·65
	Dharwar District.					
60	Dharwar ...	34,327	428	418	846	24·64
61	Hubli ...	69,140	956	919	1,875	27·12
62	Gadag-Bettigeri ...	41,158	663	655	1,318	32·02
63	Ranebennur ...	13,930	288	284	572	41·06
64	Nawalgund ...	7,089	91	82	173	24·40
	Bijapur District.					
65	Bijapur ...	32,471	577	510	1,087	33·48
66	Bagalkot ...	19,471	389	346	735	37·75
67	Guledgud ...	14,760	331	291	622	42·14
68	Ilkal ...	11,856	218	220	438	36·94
	Kanara District.					
69	Karwar ...	14,463	189	208	397	27·45
70	Kumta ...	14,291	198	187	385	26·90
71	Gokarn ...	8,307	143	128	271	32·62
72	Honawar ...	7,035	141	150	291	41·36
73	Bhatkal ...	7,134	121	131	252	35·32
	Surat District.					
74	Surat ...	117,428	1,549	1,424	2,973	25·32
75	Bulsar ...	19,661	286	254	540	27·44
76	Rander ...	10,547	130	109	239	22·66
	Broach District.					
77	Broach ...	42,626	942	993	1,935	45·39
78	Jambusar ...	10,217	205	221	426	41·69
79	Ankleshwar ...	11,756	265	219	484	41·17

No. VI—*continued.*

5	6	7	8	9	10	11	
						INJURIES *(continued on next page.)*	
Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory — Diseases	Suicide.	
						Male.	Female.
2	2	21	164	38	130	...	...
25	...	7	58	34	36	...	...
2	1	1	70	23	61	1	1
...	...	20	51	17	67	...	...
...	6	2	16	3	8	...	...
...	...	285	199	56	216	2	...
18	...	1405	680	76	509	...	1
...	...	16	254	29	228	3	...
5	...	52	114	24	69	...	...
...	...	106	29	3	18	...	...
4	...	40	64	52	164	2	...
...	...	151	172	26	76	1	...
...	...	3	177	15	35	...	...
...	...	1	97	5	73	...	...
...	...	...	48	13	25	...	...
...	...	1	76	24	13	...	...
...	...	...	5	19	50	...	...
...	...	1	32	13	9	...	...
...	...	...	42	10	12	...	...
...	12	2	537	262	1,340	2	1
...	...	1	57	6	128	...	1
...	...	...	99	16	71	...	...
...	1	...	232	51	503	...	...
...	..	...	121	6	111	...	...
...	...	...	252	...	40	...	...

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1	2	11				12	13
		Injuries—*contd.*					
No.	Districts and Towns.	Wounding or accident.	Snake-bite, or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.
	B.—Towns—*contd.*						
	Belgaum District.						
55	Belgaum ...	14	...	2	16	324	697
56	Gokak ...	5	...	...	5	112	277
57	Athni ...	4	...	...	6	84	248
58	Nipani ..	6	1	...	7	66	228
59	Belgaum Cantonment ...	...	...	...	...	20	55
	Dharwar District.						
60	Dharwar ...	12	...	...	14	355	1,125
61	Hubli ...	27	...	2	30	711	3,429
62	Gadag-Bettigeri ...	15	...	...	18	528	1,073
63	Ranebennur ...	8	...	...	8	238	510
64	Nawalgund ...	4	...	...	4	81	241
	Bijapur District.						
65	Bijapur ...	20	...	...	22	406	762
66	Bagalkot ...	7	1	...	9	242	676
67	Guledgud ...	3	...	...	3	187	420
68	Ilkal ...	...	...	...	...	243	419
	Kanara District.						
69	Karwar ...	3	...	...	3	119	208
70	Kumta ...	5	1	...	6	91	211
71	Gokarn ...	1	...	...	1	74	149
72	Honawar ...	3	...	...	3	72	130
73	Bhatkal ...	3	...	...	3	51	118
	Surat District.						
4	Surat ...	43	1	...	47	1,443	3,643
75	Bulsar ...	4	...	...	5	141	338
76	Rander ...	...	...	...	...	77	263
	Broach District.						
77	Broach ...	20	1	3	24	551	1,362
78	Jambusar ...	3	1	...	4	24	266
79	Ankleshwar ...	2	1	...	3	49	344

No. VI—*continued.*

14

RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
								For the year.	Mean of previous five years.
·06	·06	·58	4·53	1·05	3·59	·44	8·95	19·25	36·22
2·50	...	·70	5·81	3·40	3·60	·50	11·21	27·73	39·34
·14	·07	·07	5·17	1·70	4·51	·44	6·20	18·32	26·88
.....	...	1·68	4·29	1·43	5·64	·59	5·56	19·20	25·29
.....	·87	·29	2·33	·44	1·16	...	2·91	7·99	18·49
.....	...	8·30	5·80	1·63	6·29	·41	10·31	32·77	36·57
·26	...	20·32	9·84	1·10	7·56	·43	10·28	49·59	36·25
.....	...	·39	6·17	·70	5·54	·44	12·83	26·07	41·08
·39	...	3·73	8·18	1·72	4·95	·57	17·09	36·60	43·42
.....	...	14·95	4·09	·42	2·54	·56	11·43	33·99	22·90
·12	...	1·23	1·97	1·60	5·05	·68	12·50	23·16	34·20
.....	...	7·76	8·83	1·34	3·90	·46	12·43	34·72	43·37
.....	...	·20	11·99	1·02	2·37	·20	12·67	28·45	27·10
.....	...	·09	8·18	·42	6·16	...	20·50	35·34	45·39
.....	...	...	3·32	·90	1·73	·21	8·23	14·38	14·52
.....	...	·07	5·32	1·68	·91	·42	6·37	14·76	25·16
.....	...	...	·60	2·29	6·02	·12	8·91	17·94	35·92
.....	...	·14	4·55	1·85	1·28	·43	10·23	18·48	24·60
.....	...	...	5·89	1·40	1·68	·42	7·15	16·54	24·99
.....	·10	·02	4·58	2·23	11·41	·40	12·28	31·02	4·73
.....	...	·05	2·89	·30	6·51	·25	7·17	17·17	23·28
.....	...	...	9·39	1·52	6·73	...	7·30	24·94	29·14
.....	·02	...	5·44	1·20	11·80	·56	12·93	31·95	41·45
.....	...	...	11·85	·59	10·86	·39	2·35	26·04	42·99
.....	...	...	21·44	.....	3·40	·25	4·17	29·26	34·63

1	2	3	4			
			Births.			
No.	Districts and Towns.	Population according to Census of 1921.	Male	Female.	Total.	Birth rate.
	B.—Towns—*contd.*					
	Kaira District.					
80	Kaira ...	8,277	140	109	249	30·08
81	Mehmedabad ...	6,236	145	116	261	41·85
82	Nadiad ...	31,919	604	534	1,138	35·65
83	Borsad ...	12,113	338	334	672	55·47
84	Anand ...	11,024	182	143	325	29·48
85	Umreth ...	14,024	314	317	631	44·99
86	Dakore ...	7,990	138	150	288	36·04
87	Kapadvanj ...	14,794	327	291	618	41·77
	Panch Mahals District.					
88	Godhra ...	26,969	235	197	432	16·01
89	Dohad ...	16,071	259	282	541	33·66
	Ahmedabad District.					
90	Ahmedabad ...	2,70,599	5,712	5,346	11,058	40·85
91	Dhandhuka ...	8,056	176	168	344	42·70
92	Viramgaon ...	26,252	426	376	802	30·55
93	Dholka ...	12,513	291	297	588	46·99
94	Ahmedabad Cantonment. ...	1,745	16	13	29	16·62
	Karachi District.					
95	Karachi ...	199,014	4,482	4,174	8,656	43·49
96	Tatta ...	8,470	122	75	197	23·26
97	Kotri ...	9,072	93	65	158	17·40
98	Karachi Cantonment ...	6,525	88	97	185	28·35
	Hyderabad District.					
99	Hyderabad ...	72,625	1,603	1,379	2,982	41·05
100	Halla ...	5,757	70	68	138	23·97
101	Matiari ...	4,688	60	51	111	23·68
102	Hyderabad Cantonment ...	3,760	20	17	37	9·84
	Thar and Parkar District.					
103	Umarkot ...	4,199	48	44	92	21·91
104	Mirpurkhas ...	5,765	27	23	50	8·67

No. VI—*continued.*

5	6	7	8	9	10	11 Injuries (*continued on next page.*)	
						Suicide.	
Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory. Diseases.	Male.	Female.
.....	.....	.....	65	12	57	...	...
.....	.....	.....	88	5	37	...	...
.....	.....	.....	609	11	244	...	...
.....	.....	.....	209	61	60	...	...
.....	.....	.....	143	15	.....	...	...
.....	.....	1	153	.....	172	...	...
1	.....	.....	86	20	87	2	...
1	42	.....	177	20	184	...	...
.....	.....	1	264	.....	5	...	...
.....	.....	.....	271	6	12	...	...
2	3	4	2,416	412	4,474	1	...
.....	.....	.....	138	7	61	...	...
.....	.....	.....	358	9	227	...	...
.....	.....	.....	161	7	68	...	...
.....	.....	.....	25	.....	1	...	...
3	42	457	1,226	239	1,972	...	...
.....	.....	1	37	3	68	...	...
.....	2	.....	84	3	21	..	...
.....	.....	.....	13	1	7	...	...
...	12	2	468	89	742	...	...
.....	.....	.....	67	.....	3	...	...
.....	.....	.....	21	2	18	...	...
.....	5	.....	22	.....	.....	...	...
.....	.....	.....	41	1	29	...	...
.....	.....	.....	103	2	39	...	...

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1	2	11				12	13
		Injuries—*contd.*					
No.	Districts and Towns.	Wounding or accident.	Snake-bite, or killed by wild beasts.	Babies.	Total.	All other causes.	Total deaths from all causes.
	B.—Towns—*contd.*						
	Kaira District.						
80	Kaira ...	2	...	...	2	85	171
81	Mohmodabad ...	3	...	...	3	68	201
82	Nadiad ...	8	...	...	8	193	1,065
83	Borsad ...	5	2	...	7	168	505
84	Anand ...	...	...	1	...	77	235
85	Umreth ...	2	...	1	3	132	461
86	Dakore ...	17	1	...	20	69	283
87	Kapadvanj ...	9	1	...	10	92	526
	Panch Mahals District.						
88	Godhra ...	...	...	...	...	70	340
89	Dohad ...	1	...	...	1	50	340
	Ahmedabad District.						
90	Ahmedabad ...	104	5	10	120	2,666	10,097
91	Dhandhuka ...	5	1	...	6	32	244
92	Viramgaon ...	1	...	...	1	86	681
93	Dholka ...	4	...	1	5	64	305
94	Ahmedabad Cantonment. ...	...	...	...	...	9	35
	Karachi District.						
95	Karachi ...	93	...	9	102	2,315	6,356
96	Tatta ...	2	...	...	2	47	169
97	Kotri ...	2	...	...	2	11	123
98	Karachi Cantonment ...	...	...	...	...	21	42
	Hyderabad District.						
99	Hyderabad ...	33	...	...	33	480	1,826
100	Halla ...	...	...	...	...	4	74
101	Matiari ...	2	...	...	2	43	86
102	Hyderabad Cantonment ...	...	...	...	...	16	43
	Thar and Parkar District.						
103	Umarkot ...	1	...	...	1	20	92
104	Mirpurkhas ...	3	...	...	3	6	153

No. VI—*continued.*

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RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.
.....	...	...	7·85	1·46	6·88	·24	4·23	20·66	47·74
.....	...	...	14·11	·80	5·93	·48	10·91	32·23	36·60
.....	...	...	19·08	·35	7·64	·25	6·05	33·37	47·55
.....	...	...	17·25	5·04	4·95	·58	13·87	41·69	45·40
.....	...	...	12·97	1·36	...	...	6·98	21·31	35·61
.....	...	·07	10·91	.....	12·27	·21	9·41	32·87	42·73
·13	...	...	10·76	2·50	10·89	2·50	8·64	35·42	49·24
·06	2·84	...	11·96	1·35	12·44	·68	6·22	35·55	43·77
.....	...	·04	9·79	.....	·18	...	2·60	12·61	24·78
.....	...	...	16·86	·38	·74	·06	3·11	21·15	40·65
·01	·01	·02	8·92	1·52	16·54	·44	9·85	37·31	49·10
.....	...	...	17·13	·87	7·57	·74	3·97	30·28	45·65
.....	...	...	13·64	·34	8·65	·04	3·27	25·94	42·73
.....	...	...	12·87	·56	5·44	·40	5·11	24·38	47·18
.....	..	...	14·33	.....	·57	...	5·16	20·06	28·40
·02	·21	2·30	6·16	1·20	9·91	·51	11·63	31·94	42·51
.....	...	·12	4·37	·35	8·08	·24	5·55	18·65	30·54
.....	·22	...	9·26	·33	2·31	·22	1·21	13·56	29·65
.....	...	...	1·99	·15	1·07	...	3·22	6·44	30·63
.....	·16	·03	6·46	1·22	10·22	·45	6·61	25·14	36·23
.....	...	...	11·64	.....	·52	...	·69	12·85	19·36
.....	...	...	4·53	·44	3·87	·44	9·25	18·54	41·84
.....	1·33	...	5·85	.....	...	...	4·26	11·44	14·71
.....	...	...	9·76	·24	6·90	·24	4·77	21·91	42·58
.....	...	...	17·86	·34	6·77	·52	1·03	26·52	39·71

1	2	3	4			
			Births.			
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth-rate.
	B.—Towns—*contd.*					
	Nawabshah District.					
105	Nawabshah ...	2,771	49	22	71	25·62
106	Tando Adam ...	12,966	83	67	150	11·57
	Larkana District.					
107	Larkana ...	17,700	292	274	566	31·98
108	Kambar ...	7,613	101	80	181	23·72
109	Ratodero ...	5,565	120	105	225	40·42
110	Sehwan ...	4,428	53	40	93	21·04
	Sukkur District.					
111	Sukkur ...	42,046	695	619	1,314	31·24
112	Shikarpur ...	55,347	927	754	1,681	30·37
113	Rohri ...	11,378	196	127	323	28·38
114	Gari Yasin ...	6,375	115	84	199	31·20
	Upper Sind Frontier District.					
115	Jacobabad ...	10,578	123	92	215	20·32
	Total of Towns ...	3,743,785	52,480	48,528	101,008	26·98
	Total for the Presidency ...	19,165,614	354,890	327,020	681,910	35·58

No. VI—*continued.*

5	6	7	8	9	10	11 INJURIES (*continued on next page*).	
Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Suicide.	
						Male.	Female.
.....	.....	.....	49	.....	6	.....	...
.....	.....	6	79	1	27	.....	...
2	.....	.....	261	11	21	.....	...
.....	1	.....	102	2	5	.....	...
.....	.....	.....	108	.....	1	.....	...
.....	.....	.....	26	.....	41	.....	...
1	2	.....	598	22	25	1	...
.....	5	1	745	11	52	1	...
.....	2	.....	193	26	21	.....	...
.....	.....	.....	134	.....	9	.....	...
.....	.....	.....	153	1	10	.....	...
1,258	1,419	7,177	25,373	6,564	33,948	97	41
9,221	2,811	33,741	196,231	22,238	84,334	321	197

ANNUAL FORM

1	2	11				12	13
		INJURIES—*contd.*					
No.	Districts and Towns.	Wounding or accident.	Snake-bite or killed by wild beasts.	Rabies.	Total.	All other causes.	Total deaths from all causes.
	B.—TOWNS—*concld.*						
	Nawabshah District.						
105	Nawabshah ...	2	...	...	2	1	56
106	Tando Adam ...	4	...	...	4	3	120
	Larkana District.						
107	Larkana ...	10	...	...	10	174	479
108	Kambar ...	2	2	...	4	11	125
109	Ratodero ...	2	...	...	2	6	117
110	Sehwan ...	2	...	...	2	36	105
	Sukkur District.						
111	Sukkur ...	13	1	...	15	150	813
112	Shikarpur ...	7	...	1	9	1,003	1,826
113	Rohri ...	...	...	...	...	22	269
114	Gari Yasin ...	...	...	...	...	2	139
	Upper Sind Frontier District.						
115	Jacobabad ...	...	...	...	...	44	208
	Total of Towns ...	1,694	52	62	1,846	35,126	112,711
	Total for the Presidency ...	5,433	1,327	236	7,514	140,154	496,244

No. VI—*concluded.*

14

RATIO OF DEATHS PER 1,000 OF POPULATION.

Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
								For the year.	Mean of previous five years.
.....	...	...	17·68	.....	2·17	·72	·36	20·98	26·00
.....	...	·46	6·09	·08	2·09	·31	·23	9·25	24·60
·11	...	...	14·74	·62	1·19	·56	9·83	27·05	40·52
.....	·13	...	13·29	·26	·66	·53	1·44	16·41	34·55
.....	...	...	19·40	.....	·18	·36	1·08	21·02	34·52
.....	...	...	5·90	.....	9·25	·45	8·14	23·74	36·08
·02	·05	...	14·22	·52	·60	·36	3·57	19·34	29·32
.....	·09	·02	13·46	·20	·94	·16	18·11	32·98	38·20
.....	·18	...	17·40	2·28	1·84	...	1·94	23·64	37·28
.....	...	...	21·03	.....	·46	...	·31	21·80	39·07
.....	...	...	14·47	·09	·94	...	4·16	19·66	26·38
0·34	0·38	1·92	6·78	1·75	9·07	0·49	9·58	30·11	43·10
0·48	0·15	1·76	10·24	1·16	4·40	0·39	7·31	25·89	39·77

ANNUAL FORM NO. VI (*a*)—DEATHS *registered from certain during the*

1	2	3	4		5	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.	
			Deaths.	Ratio.	Deaths.	Ratio.
	A.—DISTRICTS EXCLUDING TOWNS.					
	Western Registration District.					
1	East Khándesh	918,037	...	...	331	·36
2	West Khándesh	568,809	...	...	30	·05
3	Násik	705,858	...	...	101	·14
4	Thána	694,658	...	...	14	·02
5	Bombay Suburban	91,943	...	...	3	·03
6	Kolába	533,270	...	...	41	·08
	Central Registration District.					
7	Ahmednagar	667,106	91	·13	161	·24
8	Poona	770,334	81	·11	114	·15
9	Sholápur	574,999	39	·07	193	·34
10	Sátára	964,847	25	·03	444	·46
11	Ratnágiri	1,083,350	34	·03	94	·09
	Southern Registration District.					
12	Belgaum	871,163	191	·22	576	·66
13	Dhárwár	870,565	342	·39	314	·36
14	Bijápur	717,798	148	·21	249	·35
15	Kánara	350,246	266	·76	6	·02
	Gujarat Registration District.					
16	Surat	526,465	...	...	49	·09
17	Broach	243,112	...	...	53	·22
18	Kaira	604,528	...	...	202	·33
19	Panch Mahals	331,791	...	...	80	·24
20	Ahmedabad	568,759	...	...	341	·60
	Sind Registration District.					
21	Karáchi	307,576	25	·08	3	·01
22	Hyderabad	480,469	36	·08	2	·00
23	Thar and Párkar	386,343	155	·40	4	·01
24	Nawábshah	402,915	178	·44	7	·02
25	Lárkana	562,636	54	·10	2	·00
26	Sukkur ... —	394,216	58	·15	30	·08
27	Upper Sind Frontier	230,036	11	·05	2	·01
	Total of Districts ...	15,421,829	1,734	0·11	3,446	0·22

diseases in the DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *year 1922.*

6		7		8		9		10	
Relapsing Fever.		Kala Azar.		Malaria.		Other Fevers.		Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	2	·00	10,924	11·65	...	...
...	...	...	...	6	·01	7,097	12·48	...	...
...	...	..	...	11	·01	9,073	13·01	1	·00
...	...	...	...	11	·02	11,958	17·21	328	·47
...	...	...	...	18	·20	960	10·44	...	...
...	...	..	...	14	·03	8,353	15·66	...	...
...	...	...	...	2,170	3·25	2,539	3·81	1	·00
...	...	...	...	3,082	4·00	5,120	6·64	...	...
...	...	...	...	257	·45	6,764	11·76	2	·00
...	...	...	...	224	·23	9,132	9·46	116	·12
...	...	...	...	141	·13	8,063	7·44	9	·01
7	·01	...	...	1,834	2·11	2,913	3·34	12	·01
...	...	...	...	2,264	2·60	7,193	8·26	129	·15
...	...	...	...	1,036	1·44	6,595	9·19	42	·06
...	...	...	...	1,580	4·51	2,335	6·67	6	·02
...	...	...	...	23	·04	5,759	10·94	12	·02
...	...	...	...	...	...	3,924	16·14	3	·01
...	...	...	...	...	...	5,009	8·29	...	...
1	·00	...	...	3	·01	4,017	12·11	2	·01
...	...	...	...	83	·15	8,284	14·56	...	...
...	...	...	...	1,913	6·23	213	·69	2	·01
...	...	...	...	1,844	3·84	2,349	4·88	...	...
...	...	...	...	3,049	7·89	880	2·28	6	·02
...	...	...	...	2,480	6·16	875	2·17	...	...
...	...	...	...	3,799	6·75	1,284	2·28	...	...
...	...	...	...	4,167	10·57	1,091	2·77	...	...
...	...	...	...	1,724	7·49	560	2·43	...	...
8	·00	...	...	31,735	2·06	133,264	8·64	671	·05

ANNUAL FORM

No.	2 Districts and Towns.	11 Pneumonia.		12 Phthisis.		13 Other Respiratory Diseases.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	A.—DISTRICTS EXCLUDING TOWNS—*concld.*						
	Western Registration District.						
1	East Khandesh	1	...	102	·11	2,715	2·92
2	West Khandesh	6	·01	75	·13	1,525	2·68
3	Nasik	10	·01	144	·24	2,851	4·04
4	Thana	46	·07	474	·68	516	·74
5	Bombay Suburban	15	·16	65	·71	66	·72
6	Kolaba	20	·04	824	1·55	284	·53
	Central Registration District.						
7	Ahmednagar	18	·03	301	·45	3,247	4·87
8	Poona	106	·14	562	·73	2,546	3·31
9	Sholapur	6	·01	209	·36	1,436	2·50
10	Satara	29	·03	457	·47	1,483	1·54
11	Ratnágiri	10	·01	2,569	2·37	1,837	1·70
	Southern Registration District.						
12	Belgaum	24	·03	551	·63	2,069	2·38
13	Dhárwár	3	·00	509	·58	1,972	2·28
14	Bijápur	3	·00	383	·53	1,588	2·21
15	Kánara	4	·01	173	·50	421	1·12
	Gujarat Registration District.						
16	Surat	1,574	2·99	547	1·04	3,451	6·56
17	Broach	510	2·10	224	·92	1,591	6·54
18	Kaira	215	·36	1,027	1·70	4,159	6·88
19	Panch Mahâls	128	·39	186	·56	797	2·40
20	Ahmedabad	374	·66	829	1·46	1,444	2·54
	Sind Registration District.						
21	Karáchi	75	·24	17	·06	56	·18
22	Hyderabad	118	·24	20	·04	57	1·12
23	Thar and Párkar	331	·86	19	·05	54	·14
24	Nawábshah	117	·29	14	·03	45	·11
25	Lárkana	16	·03	7	·01	35	·06
26	Sukkur	8	·02	3	·01	39	·10
27	Upper Sind Frontier	14	·06	...	...	9	·04
	Total of Districts ...	3,782	·25	10,291	·67	36·313	2·35

No. VI (*a*)—*continued.*

14 Dysentery.		15 Diarrhœa.		16	17 Deaths under 1 year.			18	19
Deaths.	Ratio.	Deaths.	Ratio.	Deaths from child birth.	Male.	Female.	Total.	Infant mortality rate per 1,000 births.	No.
91	·10	653	·70	289	3,750	3,216	6,966	138·42	1
21	·04	112	·20	192	2,271	1,979	4,250	154·48	2
62	·09	586	·83	124	3,174	2,603	5,777	171·22	3
65	·09	110	·16	180	1,457	1,299	2,756	127·09	4
22	·24	57	·62	30	138	113	251	147·39	5
32	·06	259	·49	200	1,708	1,447	3,155	148·97	6
527	·79	1,323	1·98	76	3,075	2,398	5,473	154·71	7
82	·11	1,263	1·64	148	2,521	1,948	4,469	144·31	8
8	·01	1,696	2·95	102	2,285	1,904	4,189	159·16	9
1,214	1·25	510	0·53	112	3,030	2,551	5,581	141·83	10
584	·54	250	·24	172	1,957	1,535	3,492	83·46	11
114	·13	1,841	2·11	151	2,491	1,989	4,480	122·76	12
73	·08	702	·81	216	2,822	2,243	5,065	160·28	13
127	·18	1,002	1·40	110	2,113	1,772	3,885	130·50	14
176	·50	473	1·35	238	1,395	1,096	2,491	193·17	15
108	·21	176	·33	23	1,714	1,503	3,217	172·40	16
19	·04	157	·65	19	1,123	1,007	2,130	197·02	17
160	·27	437	·72	25	1,880	1,681	3,561	159·40	18
16	·05	145	·43	85	766	708	1,474	116·49	19
167	·29	196	·34	13	1,518	1,352	2,870	140·82	20
2	·01	7	·02	37	307	262	569	154·32	21
10	·02	6	·01	83	551	412	963	141·99	22
5	·01	4	·01	71	480	475	955	108·12	23
4	·01	6	·02	93	520	413	933	105·60	24
5	·01	2	·00	248	686	576	1,262	107·58	25
...	...	6	·02	130	881	767	1,648	130·96	26
1	·00	...	...	24	347	288	635	133·96	27
3,686	·24	11,998	·78	3,193	44,960	37,537	82,497	142·02	

ANNUAL FORM

1	2	3	4		5	
			Enteric Fever.		Measles.	
No.	Districts and Towns.	Population according to Census of 1921.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS.					
	East Khandesh District.					
1	Jalgaon	23,696	1	·04	10	·42
2	Bhusáwal	24,933	...	...	13	·52
3	Chopda	16,930	...	...	...	...
4	Dharangaon	14,824	...	...	1	·07
5	Parola	12,079	...	...	1	·08
6	Amálner	17,068	...	...	...	...
7	Erandol	12,489	...	...	...	...
8	Nasirabad	12,188	...	...	...	...
9	Chálisgaon	11,990	...	...	...	...
10	Yawal	10,888	...	...	...	...
	West Khandesh District.					
11	Dhulia	30,061	...	...	1	·03
12	Nandurbar	13,842	...	...	...	...
	Nasik District.					
13	Násik	42,715	...	...	65	1·52
14	Yeola	13,911	...	...	11	·79
15	Málegaon	23,711	...	...	21	·89
16	Igatpuri	9,977	...	...	1	·10
17	Manmad	11,866	...	...	...	...
18	Trimbak	4,538	...	...	...	...
19	Deolali Cantonment	12,640	...	...	...	...
	Thana District.					
20	Thána	23,116	...	...	...	...
21	Bhiwandi	12,188	...	...	1	·08
22	Kalyán	17,573	...	...	1	·06
23	Bassein	10,364	...	...	...	...
	Bombay Suburban District.					
24	Bandra	28,738	6	·21	2	·07
25	Kurla	26,059	...	...	...	...
26	Santa Cruz Cantonment	4,701	...	...	...	...
	Kolaba District.					
27	Alibág	5,253	...	...	1	·19
28	Panwel	8,622	...	...	...	...
29	Mahád	7,192	...	...	...	...

No. VI (*a*)—*continued.*

6 Relapsing Fever.		7 Kala Azar.		8 Malaria.		9 Other Fevers.		10 Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	2	·08	116	4·89	1	·04
...	...	...	...	...	...	217	8·70	...	...
...	...	...	...	...	...	111	6·55	...	...
...	...	...	...	...	...	66	4·45	...	...
...	...	...	...	...	...	114	9·45	...	...
...	...	...	...	...	...	62	3·63	...	...
...	...	...	...	...	...	77	6·16	...	...
...	...	...	...	...	...	106	8·70	...	...
...	...	...	...	...	...	140	11·68	...	...
...	...	...	...	30	2·75	65	5·96	...	...
...	...	...	...	1	·08	96	3·19	...	...
...	...	...	...	...	...	86	6·21	3	·22
...	...	...	...	5	·12	167	5·55	...	...
1	·07	...	...	...	...	222	16·82	...	...
...	...	...	...	...	...	202	9·40	...	...
...	...	...	...	2	·20	30	3·31	...	...
...	...	...	...	...	...	55	4·63	...	...
...	...	...	...	...	...	23	5·07	...	...
...	...	...	...	2	·16	...	...	...	...
...	...	...	...	...	...	219	9·90	...	...
...	...	...	...	...	...	40	3·28	...	...
...	...	...	...	66	3·75	16	·91	...	...
...	...	...	...	...	...	83	8·00	1	·10
1	·04	...	...	14	·49	21	·73	...	...
...	...	...	...	1	·04	334	12·83	...	...
...	...	...	...	...	...	2	·43	...	...
...	...	...	...	...	...	67	12·76	...	...
...	...	...	...	...	...	106	12·99	...	...
...	...	...	...	...	...	34	4·72	...	...

1	2	11		12		13	
		Pneumonia.		Phthisis.		Other Respiratory diseases.	
No.	Districts and Towns.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*						
	East Khandesh District.						
1	Jalgaon	7	·29	8	·34	34	1·44
2	Bhusáwal	4	·16	8	·32	50	2·01
3	Chopda	...	...	3	·18	41	2·42
4	Dharangaon	1	.07	5	·34	43	2·90
5	Parola	...	...	2	·17	56	4·63
6	Amálner	...	...	3	·17	56	3·28
7	Erandol	...	...	15	1·20	44	3·52
8	Nasirabad	...	...	2	·16	79	6·48
9	Chálisgaon	1	·08	5	·42	28	2·33
10	Yawal	26	2·39	3	·28	16	1·47
	West Khandesh District.						
11	Dhulia	27	·89	34	1·13	87	2·89
12	Nandurbar	...	...	6	·43	71	5·13
	Nasik District.						
13	Násik	26	·51	76	1·78	249	5·83
14	Yeola	...	...	16	1·15	86	6·18
15	Málegaón	1	·04	7	·29	50	2·11
16	Igatpuri	2	·20	11	1·10	33	3·30
17	Manmad	1	·08	10	·84	21	1·77
18	Trimbak	...	...	5	1·10	19	4·19
19	Deolali Cantonment	17	1·34	12	·95	6	·47
	Thana District.						
20	Thána	17	·77	64	2·89	5	·22
21	Bhiwandi	22	1·81	61	5·00	35	2·87
22	Kalyán	76	4·32	26	1·48	37	2·11
23	Bassein	8	·77	18	1·74	12	1·16
	Bombay Suburban District.						
24	Bandra	55	1·91	36	1·25	54	1·88
25	Kurla	3	·12	14	·53	21	·81
26	Santa Cruz Cantonment ...	1	·21	...	...	...	...
	Kolaba District.						
27	Alibág	...	...	21	4·00	1	·19
28	Panwel	...	...	8	·93	7	·81
29	Mahád	...	...	11	1·53	7	·97

No. VI (*a*)—*continued.*

14		15		16	17			18	19
Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
5	·21	14	·59	14	47	38	85	136·00	1
2	·08	8	·32	9	66	42	108	156·84	2
2	·12	5	·29	3	30	24	54	100·56	3
...	...	32	2·16	6	48	44	92	198·28	4
...	...	4	·33	11	49	49	98	175·84	5
1	·06	10	·58	3	32	20	52	182·46	6
3	·24	5	·40	7	44	39	83	167·01	7
...	...	29	2·29	5	66	37	103	166·66	8
2	·17	5	·42	3	38	29	67	139·29	9
1	·09	8	·73	7	29	23	52	99·05	10
1	·03	32	1·06	19	95	70	165	157·29	11
...	...	11	·79	7	41	26	67	141·05	12
18	·42	76	1·78	10	153	135	288	203·59	13
2	·14	18	1·29	2	48	42	90	213·78	14
...	...	23	·97	2	73	75	148	187·57	15
...	...	6	·60	3	9	6	15	51·73	16
1	·06	4	·33	...	17	7	24	113·21	17
...	...	4	·88	...	9	11	20	162·60	18
3	·24	1	·08	...	8	10	18	296·08	19
5	·22	13	·59	15	38	32	70	180·41	20
...	...	40	3·28	9	40	28	68	178·95	21
1	·06	6	·34	13	33	30	62	149·76	22
8	·77	5	·48	1	26	20	46	145·14	23
22	·76	14	·49	5	78	61	139	218·89	24
33	1·26	...	...	18	31	30	61	176·81	25
...	...	...	...	...	1	1	2	153·84	26
1	·19	1	·19	4	14	11	25	255·10	27
1	·12	3	·35	2	11	12	23	141·97	28
5	·70	7	·97	1	13	16	29	162·92	29

1	2	3	4		5	
			Enteric Fever.		Measles.	
No.	Districts and Towns.	Population according to Census of 1921.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*					
	Kolaba District—concluded.					
30	Uran	8,135	...	...	6	·74
31	City of Bombay	1,148,815	130	·11	142	·12
	Ahmednagar District.					
32	Ahmednagar	33,138	8	·25	...	...
33	Sangamner	12,737	1	·08	...	...
34	Ahmednagar Cantonment	10,997	3	·27	...	...
	Poona District.					
35	Poona City	133,122	94	·71	71	·53
36	Poona Suburban	13,971	1	·07	1	·07
37	Baramati	11,905		·25	8	·67
38	Khed	7,013	...	...	...	...
39	Lonávla	10,471	...	...	...	...
40	Junnar	7,376	...	...	1	·13
41	Poona Cantonment	25,498	...	...	...	...
42	Kirkee do.	7,991	...	...	1	·13
	Sholapur District.					
43	Sholápur	119,347	5	0·04	46	0·39
44	Bársi	22,074	...	...	26	1·18
45	Pandharpur	25,210	6	0·24	22	0·87
	Satara District.					
46	Sátára	22,454	1	0·04	8	0·35
47	Wái	10,208	8	0·78	...	...
48	Karád	11,255	1	0·09	8	0·71
49	Ashta	9,016	...	...	...	...
50	Islámpur	7,915	...	...	...	...
	Ratnagiri District.					
51	Ratnágiri	18,286	2	·11	...	...
52	Vengurla	19,126	...	...	...	...
53	Málwan	22,213	...	...	3	·14
54	Chiplun	11,005	...	...	5	·46
	Belgaum District.					
55	Belgaum	36,214	5	·14	39	1·08
56	Gokák	9,989	10	1·00	...	...
57	Athni	13,538	1	·07	5	·35
58	Nipáni	11,878	4	·34	4	·34
59	Belgaum Cantonment	6,880	...	...	...	...

No. VI (*a*)—*continued.*

6 Relapsing Fever.		7 Kala Azar.		8 Malaria.		9 Other Fevers.		10 Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	...	...	56	6·88	...	...
5	·00	1	·00	367	·32	2,919	2·54	249	·21
...	...	...	...	17	·51	16	·48	...	...
...	...	...	...	80	2·36	25	1·96	...	...
...	...	...	...	2	·18	33	3·00	...	...
1	·01	...	...	248	1·86	154	1·16	1	·01
...	...	...	...	19	1·36	80	5·73	...	...
...	...	...	...	...	...	98	8·23	...	...
...	...	...	...	10	1·43	23	3·28	...	...
...	...	...	...	63	6·02	1	0·10	...	...
...	...	...	...	3	·41	40	5·42	...	...
...	...	...	...	...	...	96	3·76	...	...
...	...	...	...	4	·50	2	·25	...	...
...	...	...	...	4	0·03	2,039	17·08	...	...
...	...	...	...	3	0·14	566	25·64	1	0·04
...	...	...	...	6	0·24	532	21·19	...	...
...	...	...	...	1	0·04	101	4·50	1	0·04
...	...	...	...	3	0·29	26	2·56	...	...
...	...	...	...	...	...	19	1·69	...	...
...	...	...	...	...	...	27	2·99	...	...
...	...	...	...	5	0·63	38	4·80	...	...
...	...	...	...	4	·22	33	1·80	...	...
...	...	...	...	9	·47	105	5·49	...	...
...	...	...	...	1	·04	105	4·73	...	...
...	...	...	...	...	...	83	7·54	...	...
...	...	...	...	10	·28	106	2·93	4	·11
...	...	...	...	3	·30	45	4·50	...	...
...	...	...	...	7	·52	57	4·21	...	...
...	...	...	...	1	·08	42	3·54	...	...
...	...	...	...	...	...	16	2·33	...	...

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1	2	11		12		13	
		Pneumonia.		Phthisis.		Other Respiratory diseases.	
No.	Districts and Towns.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*						
	Kolaba District—concluded.						
30	Uran	...	...	11	1·35	6	·74
31	City of Bombay	9,539	8·30	1,203	1·05	4,506	3·92
	Ahmednagar.						
32	Ahmednagar	20	·60	97	2·93	142	4·29
33	Sangamner	...	...	11	·86	25	1·96
34	Ahmednagar Cantonment	4	·36	12	1·09	38	3·46
	Poona District.						
35	Poona City	1,070	8·04	501	3·76	256	1·92
36	Poona Suburban	6	·43	4	·29	35	2·51
37	Baramati	...	..	6	·51	14	1·18
38	Khed	...	...	6	·85	34	4·85
39	Lonávla	35	3·34	17	1·63	31	2·96
40	Junnar	...	...	14	1·90	25	3·39
41	Poona Cantonment	7	·27	36	1·41	73	2·86
42	Kirkee do.	35	4·38	3	·38	49	6·13
	Sholapur District.						
43	Sholapur	36	0·30	203	1·70	323	2·71
44	Bársi	1	0·04	6	·27	34	1·54
45	Pandharpur	43	1·70	29	1·15	66	2·62
	Satara District.						
46	Sátára	16	0·80	41	1·82	42	1·87
47	Wái	3	0·29	24	2·35	35	3·43
48	Karád	...	...	3	·27	8	·71
49	Ashta	...	...	2	·22	6	·67
50	Islámpur	2	·25	9	1·14	37	4·67
	Ratnagiri District.						
51	Ratnágiri	5	·27	47	2·57	7	·38
52	Vengurla	8	·42	45	2·35	39	2·04
53	Málwan	4	·18	40	1·80	38	1·71
54	Chiplún	...	...	33	3·00	15	1·36
	Belgaum District.						
55	Belgaum	7	·19	84	2·32	39	1·08
56	Gokák	...	...	20	2·00	16	1·60
57	Athni	3	·21	22	1·63	36	2·66
58	Nipáni	...	...	21	1·76	46	3·03
59	Belgaum Cantonment	5	·73	...	...	3	·43

No. VI (*a*)—*continued.*

14		15		16	17			18	19
Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
1	·12	6	·74	7	12	19	31	224·64	30
166	·69		2·14	95	4,529	4,024	8,553	413·91	31
9	·27	17	·51	2	37	38	75	102·74	32
7	·55	14	1·10	1	27	14	41	98·80	33
11	1·00	6	·55	3	16	14	29	85·04	34
6	·04	237	1·78	58	704	586	1,290	592·01	35
...	...	9	·64	1	41	20	61	374·23	36
...	...	17	1·43	1	30	18	48	161·62	37
...	...	3	·43	3	9	17	26	143·65	38
...	...	13	1·23	4	33	28	61	258·47	39
...	...	7	·95	...	10	9	19	101·60	40
5	·20	18	·71	15	18	8	26	282·61	41
2	·25	28	3·50	....	20	20	40	338·98	42
1	·01	272	2·28	16	542	406	948	233·21	43
..	...	45	2·04	2	129	105	234	366·50	44
3	·12	120	5·12	7	233	156	389	548·66	45
10	·47	4	·18	11	38	28	66	347·37	46
10	·98	4	·39	2	23	10	33	128·40	47
7	·62	4	·36	3	9	12	21	119·29	48
6	·67	.....	...	...	8	6	14	51·56	49
6	·76	1	·13	2	17	11	28	123·89	50
4	·22	6	·33	...	9	11	20	53·76	51
36	1·88	8	·42	1	51	49	100	140·85	52
5	·23	6	·27	1	38	29	67	113·18	53
2	·18	2	·18	...	16	12	28	25·89	54
18	·50	20	·55	5	51	40	91	90·56	55
1	·10	33	3·30	...	40	17	57	140·39	56
...	...	23	1·70	...	23	18	41	82·78	57
1	·08	16	1·36	1	22	19	41	101·23	58
2	·29	1	·14	...	4	8	12	375·00	59

1	2	3	4		5	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.	
			Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*					
	Dharwar District.					
60	Dhárwár	34,827	16	·47	6	·17
61	Hubli	69,140	52	·75	15	·22
62	Gadag Bettigeri	41,158	7	·17	38	·92
63	Ránebennur	13,930	26	1·15	48	3·44
64	Nawalgund	7,089	...	...	1	·14
	Bijapur District.					
65	Bijápur	32,471	18	·55	1	·03
66	Bágalkot	19,471	2	·10	70	3·60
67	Guledgud	14,760	...	...	37	2·51
68	Ilkal	11,856	27	2·28	...	...
	Kanara District.					
69	Kárwár	14,463	4	·28	2	·14
70	Kumta	14,291	7	·49	...	...
71	Gokarn	8,307	...	...	...	...
72	Honáwar	7,035	...	...	...	...
73	Bhatkal	7,134	1	·14	...	...
	Surat District.					
74	Surat	117,428	10	·09	282	2·40
75	Bulsar	19,681	...	...	1	·05
76	Ránder	10,547	...	...	...	...
	Broach District.					
77	Broach	42,626	...	...	67	1·57
78	Jambusar	10,217	...	...	7	·69
79	Ankleshwar	11,756	...	...	8	·68
	Kaira District.					
80	Kaira	8,277	...	...	1	·12
81	Mehmedabad	6,236	...	...	31	4·97
82	Nadiád	31,919	...	...	173	5·42
83	Borsad	12,113	...	...	...	...
84	Anand	11,024	...	...	...	...
85	Umreth	14,024	...	...	...	...
86	Dákore	7,990	...	...	14	1·75
87	Kapadvanj	14,794	...	...	53	3·53

No. VI (*a*)—*continued.*

6 Relapsing Fever.		7 Kala Azar.		8 Malaria.		9 Other Fevers.		10 Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	19	·55	152	4·43	6	·17
1	·01	...	...	70	1·01	540	7·81	2	·02
...	...	...	...	13	·32	187	4·54	9	·22
...	...	...	...	7	·50	29	2·08	4	·28
...	...	...	...	10	1·41	18	2·54	...	...
...	...	...	...	18	·55	27	·83	...	...
...	...	...	...	21	1·08	79	4·06	...	...
...	...	...	...	9	·61	131	8·88	...	...
...	...	...	...	35	2·95	35	2·95	...	...
...	...	...	...	14	·97	28	1·94	...	...
...	...	...	...	66	4·62	3	·21	...	...
...	...	...	...	4	·48	1	·12	...	...
...	...	...	...	4	·57	28	3·98	..	...
...	...	...	...	3	·42	38	5·33	...	...
...	...	...	...	176	1·50	68	·58	1	·01
...	...	...	...	3	·15	53	2·69	...	...
...	...	...	...	...	...	99	9·39	...	...
...	...	...	...	...	...	165	3·87	...	...
...	...	...	...	95	9·30	19	1·86	...	...
...	..	...	...	...	...	244	20·76	...	...
...	...	...	..	...	...	64	7·73	...	...
...	...	...	...	...	...	57	9·14	...	...
...	...	...	...	...	...	436	13·66	...	...
...	...	...	...	...	...	209	17·25	...	...
...	...	...	...	...	...	143	12·97	...	...
...	...	...	...	...	...	153	10·91	...	...
...	...	...	...	...	...	72	9·01	...	...
...	...	...	...	119	8·04	5	·34	...	...

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No.	2 Districts and Towns,	11 Pneumonia.		12 Phthisis.		13 Other Respiratory diseases.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*continued.*						
	Dharwar District.						
60	Dhárwár	10	·29	73	2·13	133	3·87
61	Hubli	16	·28	171	2·48	323	4·66
62	Gadag Bettigeri	16	·38	102	2·48	110	2·67
63	Ranebennur	1	·07	22	1·58	46	3·30
64	Nawalgund	...	...	12	1·60	6	·85
	Bijapur District.						
65	Bijápur	9	·28	90	2·80	66	2·00
66	Bágalkot	2	·10	16	·82	58	2·98
67	Guledgud	...	...	8	·54	27	1·83
68	Ilkal	...	...	39	3·29	34	2·87
	Kanara District.						
69	Kárwar	...	...	15	1·05	10	·70
70	Kumta	...	...	4	·28	9	·63
71	Gokarn	21	2·50	1	·12	28	3·57
72	Honáwar	...	...	6	·71	4	·57
73	Bhatkal	...	...	4	·56	8	1·13
	Surat District.						
74	Surat	358	3·05	384	3·27	598	5·09
75	Bulsar	71	3·61	23	1·17	34	1·73
76	Ránder ... —	2	·19	...	...	69	6·54
	Broach District.						
77	Broach	53	1·24	87	2·04	363	8·53
78	Jambusar	16	1·56	10	·98	35	3·32
79	Ankleshwar	2	·17	12	1·02	25	2·21
	Kaira District.						
80	Kaira	...	...	4	·48	53	6·40
81	Mehmedabad	6	·96	10	1·60	21	3·37
82	Nadiád	153	4·79	54	1·69	37	1·16
83	Borsad	4	·33	...	...	56	4·62
84	Anand	...	...	...	...	...	·00
85	Umreth	...	...	8	·57	164	11·70
86	Dakore	25	3·13	20	2·50	42	5·26
87	Kapadvanj	45	2·91	44	2·97	97	6·56

No. VI (*a*)—*continued.*

14 Dysentery,		15 Diarrhœa.		16	17 Deaths under 1 year,			18	19
Deaths.	Ratio.	Deaths.	Ratio.	Deaths from child birth.	Male.	Female.	Total.	Infant mortality rate per 1,000 births.	No.
4	·12	52	1·51	5	47	33	80	94·56	60
5	·07	71	1·03	7	145	96	241	128·53	61
8	·19	21	·51	4	128	109	237	179·82	62
...	...	24	1·72	7	50	40	90	157·34	63
1	·14	2	·28	...	9	9	18	104·05	64
24	·74	28	·86	5	75	49	124	114·08	65
6	·31	20	1·03	2	71	63	134	211·02	66
4	·27	11	·75	4	72	36	108	173·63	67
...	...	5	·42	...	45	36	81	184·94	68
5	·35	8	·56	4	19	15	34	85·64	69
3	·21	21	1·47	2	17	22	39	101·30	70
18	2·17	1	·12	2	18	8	26	95·98	71
1	·14	12	1·72	6	15	15	30	103·09	72
1	·14	9	1·26	1	6	5	11	43·65	73
62	·53	200	1·70	68	616	531	1,147	385·81	74
2	·10	4	·20	2	51	26	77	142·59	75
10	·95	6	·57	...	27	22	49	205·02	76
16	·38	35	·82	...	151	162	313	161·76	77
6	·59	...	...	...	45	44	89	208·92	78
...	...	...	...	...	40	46	86	177·69	79
5	·61	7	·85	...	20	24	44	176·71	80
2	·32	3	·48	...	47	22	69	264·37	81
7	·22	4	·13	15	156	132	288	253·08	82
51	5·04	...	...	...	94	85	179	266·37	83
15	1·36	...	...	...	25	19	44	135·38	84
...	...	...	...	...	55	62	117	185·42	85
10	1·25	10	1·25	5	43	37	80	277·78	86
...	...	20	1·35	1	78	56	134	216·83	87

1	2	3	4		5	
			Entric Fever.		Measles.	
No.	Districts and Towns.	Population according to Census of 1921.	Deaths.	Ratio.	Deaths	Ratio.
	B.—TOWNS—*continued.*					
	Panch Mahals District.					
88	Godhra	26,969	...	...	...	...
89	Dohad	16,071	...	...	...	...
	Ahmedabad District.					
90	Ahmedabad	2,70,599	...	...	1,254	4·63
91	Dhandhuka	8,056	...	...	13	1·61
92	Viramgaon	26,252	...	...	45	1·72
93	Dholka ...	12,513	...	...	14	1·12
94	Ahmedabad Cantonment	1,745	...	...	...	...
	Karachi District.					
95	Karáchi	199,014	44	·22	185	·93
96	Tatta	8,470	...	...	...	...
97	Ketri	9,072	...	...	...	...
98	Karáchi Cantonment	6,525	...	...	...	...
	Hyderabad District.					
99	Hyderabad	72,625	22	·30	6	·08
100	Halla	5,757	...	...	...	...
101	Matiari	4,638	...	...	...	...
102	Hyderabad Cantonment	3,760	...	...	...	...
	Thar and Parkar District.					
103	Umarkot	4,199	...	...	...	...
104	Mirpurkhas	5,765	...	...	...	...
	Nawabshah District.					
105	Nawábsháh	2,771	...	...	1	·36
106	Tando Adam	12,966	...	...	...	...
	Larkana District.					
107	Lárkána	17,700	...	...	13	·73
108	Kambar	7,613	1	·13	...	...
109	Ratodero	5,565	...	...	...	...
110	Sehwan	4,423	...	...	...	...

No. VI (*a*)—*continued.*

6 Relapsing Fever.		7 Kala Azar.		8 Malaria.		9 Other Fevers.		10 Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
4	·15	...	...	...	...	260	9·64	...	...
..	...	...	...	...	...	271	16·86	...	...
...	...	...	...	...	...	1,154	4·26	8	·03
...	...	...	...	...	...	125	15·52	...	...
...	...	...	...	...	...	313	11·92	...	...
...	...	...	...	...	...	147	11·75	...	...
...	...	...	...	...	...	25	14·33	...	...
...	...	...	...	36	·18	933	4·69	28	·14
...	...	...	...	9	1·06	28	3·31	...	...
...	...	...	...	84	9·26	...	...	...	...
...	...	...	...	4	·61	9	1·38	...	...
...	...	...	...	416	5·73	24	·34	...	...
...	...	...	...	48	8·34	19	3·30	...	...
...	...	...	...	20	4·31	1	·22	...	...
...	...	...	...	...	...	22	5·85	...	...
...	...	...	...	40	9·52	1	·24	...	...
...	...	...	...	102	17·69	...	...	1	·17
...	...	...	...	28	10·10	20	7·22	...	...
...	...	...	...	79	6·09	...	...	...	...
...	...	...	...	248	14·01	...	...	...	...
...	...	...	...	101	13·26	...	...	...	...
...	...	...	...	2	·36	106	19·04	...	...
...	...	...	...	24	5·45	2	·45	...	..

ANNUAL FORM

1	2	11		12		13	
		Pneumonia.		Phthisis.		Other Respiratory Diseases.	
No.	Districts and Towns.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B—TOWNS—*continued.*						
	Panch Mahals District.						
88	Godhra	...	...	3	·11	2	·07
89	Dohad	1	·06	2	·12	9	·56
	Ahmedabad District.						
90	Ahmedabad	290	1·07	962	3·55	3,222	11·91
91	Dhandhuka	1	·12	15	1·86	45	5·59
92	Viramgaon	22	·84	34	1·30	171	6·51
93	Dholka	...	...	26	2·08	42	3·36
94	Ahmedabad Cantonment	1	·57	...	....	...	...
	Karachi District.						
95	Karachi	794	3·99	360	1·81	818	4·11
96	Tatta	41	4·84	14	1·65	13	1·53
97	Kotri	14	1·54	5	·55	2	·22
98	Karachi Cantonment	4	·61	...	...	3	·46
	Hyderabad District.						
99	Hyderabad	372	5·12	209	2·88	161	2·22
100	Halla	2	·35	...	...	1	·17
101	Matiari	6	·29	10	2·15	2	·44
102	Hyderabad Cantonment	...	...	...	...	...	...
	Thar and Parkar District.						
103	Umarkot	24	5·70	1	·24	4	·96
104	Mirpurkhas	18	3·13	5	·86	16	2·78
	Nawabshah District.						
105	Nawábshah	...	...	...	...	6	2·17
106	Tando Adam	7	·54	14	1·08	6	·46
	Larkana District.						
107	Lárkána	6	·34	12	·68	3	·17
108	Kambar	4	·58	...	...	1	·13
109	Ratodero	..	...	...	...	1	·18
110	Sehwan	32	7·23	5	1·13	4	·89

No. VI (*a*)—*continued.*

14 Dysentery.		15 Diarrhœa.		16	17 Deaths under 1 year.			18	19
Deaths.	Ratio.	Deaths.	Ratio.	Deaths from child birth.	Male.	Female.	Total.	Infant mortality rate per 1,000 births.	No.
...	...	...	...	...	49	34	83	192·13	88
4	·25	2	·13	1	43	57	100	184·84	89
101	·37	311	1·15	134	1,728	1,563	3,291	297·61	90
...	...	7	·87	...	30	40	70	203·49	91
2	·07	7	·27	9	106	98	204	254·36	92
1	·08	6	·48	...	50	41	91	154·76	93
...	...	...	...	...	5	1	6	206·90	94
29	·15	210	1·05	120	1,069	822	1,891	218·46	95
...	...	3	·35	9	21	16	37	187·81	96
1	·41	2	·22	5	23	17	40	253·16	97
1	·15	...	...	...	8	5	13	70·27	98
31	·42	58	·80	34	326	292	618	207·24	99
...	...	...	...	3	14	16	30	217·39	100
1	·22	1	·22	7	18	9	27	243·24	101
...	...	...	...	...	1	4	5	135·13	102
1	·24	...	...	3	9	8	17	184·78	103
...	...	2	·34	4	18	13	31	620·00	104
...	...	...	...	1	12	6	16	253·52	105
1	·08	...	...	2	11	12	23	153·33	106
5	·28	6	·34	29	71	59	130	229·68	107
1	·13	1	·13	8	10	14	24	132·59	108
...	...	...	...	6	13	19	32	142·22	109
...	...	...	...	...	13	13	26	279·57	110

ANNUAL FORM

1	2	3	4		5	
No.	Districts and Towns.	Population according to Census of 1921.	Enteric Fever.		Measles.	
			Deaths.	Ratio.	Deaths.	Ratio.
	B—TOWNS—*continued.*					
	Sukkur District.					
111	Sukkur	43,046	...	...	1	·02
112	Shikárpur	55,347	15	·27	136	2·46
113	Rohri	11,378	...	...	2	·17
114	Garhi Yasin	6,375	...	...	8	1·26
	Upper Sind Frontier District.					
115	Jacobabad	10,578	...	...	...	...
	Total of Towns ...	3,743,785	542	·14	3,058	·82
	Total for the Presidency ...	19,165,614	2,276	·12	6,504	·34

No. VI (*a*)—*continued.*

6 Relapsing Fever.		7 Kala Azar.		8 Malaria.		9 Other Fevers.		10 Influenza.	
Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
...	...	...	...	...	...	597	14·20	...	...
...	...	...	...	77	1·39	517	9·34	...	...
...	...	...	...	149	13·10	47	4·13	...	...
...	...	...	...	126	19·77	...	...	...	...
...	...	...	...	...	...	153	14·47	...	...
13	·00	1	·00	3,223	·86	18,217	4·87	320	·09
*21	·00	1	·00	34,957	1·83	151,481	7·90	991	·05

* The figures in this sub-head are as submitted by local registrars and in default, *vide* text paragraph 45.

No.	Districts and Towns.	11 Pneumonia.		12 Phthisis.		13 Other Respiratory Diseases.	
		Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.
	B.—TOWNS—*concluded.*						
	Sukkur District.						
111	Sukkur	13	·31	7	·17	5	·12
112	Shikárpur	16	·28	9	·17	27	·49
113	Rohri	10	·88	1	·08	10	·88
114	Gárhi Yasin	2	·31	...	...	1	·15
	Upper Sind Frontier.						
115	Jacobabad	9	·85	1	·09	...	...
	Total Towns ...	13,643	3·65	5,953	1·59	14,352	3·83
	Total for the Presidency ...	17,425	·91	16,244	·85	50,665	2·64

No. VI (*a*)—*concluded.*

14		15		16	17			18	19
Dysentery.		Diarrhœa.		Deaths from child birth.	Deaths under 1 year.			Infant mortality rate per 1,000 births.	No.
Deaths.	Ratio.	Deaths.	Ratio.		Male.	Female.	Total.		
5	·12	17	·40	34	136	115	251	191·02	111
1	·02	10	·18	210	290	278	568	337·90	112
1	·08	25	2·20	11	44	31	75	232·19	113
...	...	...	...	2	26	16	42	211·06	114
1	·09	...	...	18	35	24	59	274·42	115
1,528	·40	5,036	1·34	1,210	14,268	12,147	26,415	261·51	
5,214	·27	17,024	·89	4,400	59,228	49,684	108,912	159·76	

ANNUAL FORM No. VII.—DEATHS *registered from* CHOLERA *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from cholera were reported.	Number in each District.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	23	16	1,478	33	...	...	...	...	...	...
2	West Khándesh ...	10	5	1,242	18	...	...	...	...	...	...
3	Násik	19	15	1,667	98	...	...	...	6	3	75
4	Thána	15	10	1,546	20	...	...	...	...	...	3
5	Bombay Suburban ...	5	2	86	5	...	...	...	...	...	...
6	Kolába	14	4	1,482	4	...	...	...	...	...	...
7	City of Bombay ...	1	1	1	1	...	2	3	2	...	22
	Central Registration District.										
8	Ahmednagar... ...	15	14	1,346	227	...	...	...	...	229	864
9	Poona	20	18	1,157	218	...	...	42	137	190	301
10	Sholápur	10	10	718	164	19	81	78	138	91	103
11	Sátára	19	16	1,342	193	5	86	45	121	293	188
12	Ratnágiri	15	7	1,305	12	...	39	...	...	...	...
	Southern Registration District.										
13	Belgaum	15	8	1,069	12	...	4	...	...	4	2
14	Dhárwár	18	8	1,277	41	...	...	...	...	...	...
15	Bijápur	13	7	1,128	46	5	...	...	...	54	160
16	Kánara	16	2	1,264	2	...	...	...	...	...	...
	Gujarat Registration District.										
17	Surat	12	2	782	2	...	...	3	...	...	...
18	Broach	9	...	404	...	...	...	...	...	...	...
19	Kaira	15	2	579	2	...	...	...	...	...	...
20	Panch Mahála ...	7	...	668	...	...	...	...	...	...	...
21	Ahmedabad	13	2	871	2	...	...	1	1	1	...
	Sind Registration District.										
22	Karáchi	16	1	793	1	...	...	...	...	...	...
23	Hyderabad	11	...	862	...	...	...	...	...	...	...
24	Thar and Párkar ...	13	...	904	...	...	...	...	...	...	...
25	Nawábsháh	9	...	731	...	...	...	...	...	...	...
26	Lárkána	15	1	763	1	...	...	...	...	...	...
27	Sukkur...	12	2	671	2	...	...	...	...	...	...
28	Upper Sind Frontier.	6	...	410	...	...	...	...	...	...	...
	Total for the Presidency.	366	153	26,546	1,104	29	212	172	405	865	1,717

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1923.*

July.	August.	September	October.	November.	December.	6 TOTAL. Male.	6 TOTAL. Female.	6 TOTAL. Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Female.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
1	113	53	3	...	...	86	84	170	·16	·16	·16	·62	1
...	16	46	100	14	...	77	99	176	·24	·33	·29	1·06	2
84	423	151	45	4	...	377	394	771	·90	·97	·94	1·00	3
89	55	1	...	...	1	88	61	149	·23	·17	·20	1·54	4
1	9	1	...	...	...	5	6	11	·06	.09	·07	0·16	5
12	8	1	...	...	...	12	9	21	·14	·03	·04	2·97	6
91	62	3	...	...	1	136	50	186	·18	·13	·16	2·13	7
309	555	72	15	...	...	1,046	998	2,044	2·88	2·76	2·83	0·89	8
818	533	48	27	1	1	1,117	981	2,098	2·23	2·01	2·13	0·96	9
374	387	119	20	...	...	741	668	1,409	1·94	1·86	1·90	0·97	10
193	313	94	14	1	...	720	636	1,356	1·41	1·24	1·32	0·78	11
...	...	7	10	...	...	25	31	56	0·05	0·05	0·05	0·52	12
5	7	...	30	...	...	35	17	52	·07	·04	·06	·27	13
...	53	33	44	62	33	112	113	225	·21	·22	·22	·34	14
185	37	26	5	...	...	231	241	472	·57	·62	·59	·61	15
...	...	4	...	...	1	...	5	5	...	·02	·01	·14	16
...	...	...	3	...	...	3	3	6	·01	·01	·01	·80	17
...	...	...	...	...	...	...	...	...	...	...	...	·68	18
1	...	1	...	...	...	2	...	2	·00	...	·00	·20	19
...	...	...	...	...	...	...	...	...	...	...	...	·37	20
...	...	...	...	...	...	2	1	3	·00	·00	·00	·03	21
2	1	...	...	...	...	3	...	3	·01	...	·01	·16	22
...	...	...	...	...	...	...	...	...	...	...	..	...	23
...	...	...	...	...	...	...	...	...	...	...	...	·01	24
...	...	...	...	...	...	...	...	...	...	...	...	0·01	25
...	...	...	2	...	...	...	2	2	...	·01	·00	·03	26
...	...	...	1	3	...	4	...	4	·01	...	·01	·07	27
...	...	...	...	...	...	...	...	...	...	...	...	·01	28
2,168	2,552	660	319	85	37	4,822	4,399	9,221	0·48	0·48	0·48	0·70	

ANNUAL FORM No. VIII.—DEATHS *registered from* SMALL-POX *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	23	20	1,478	89	6	5	15	22	20	18
2	West Khándesh ...	10	10	1,242	100	8	15	26	31	26	31
3	Násik	19	16	1,667	81	7	14	16	13	19	15
4	Thána	15	14	1,546	52	9	7	9	13	18	19
5	Bombay Suburban ...	5	3	86	7	...	...	3	5	3	2
6	Kolába	14	12	1,482	57	2	3	2	17	20	13
7	City of Bombay ...	1	1	1	1	18	43	75	140	67	42
	Central Registration District.										
8	Ahmednagar ...	15	8	1,346	19	5	9	3	3	1	...
9	Poona	20	16	1,157	63	18	11	11	20	25	33
10	Sholápur	10	9	718	9	1	...	3	...	4	5
11	Sátára	19	15	1,342	42	3	12	26	20	17	11
12	Ratnágiri	15	13	1,305	54	1	6	9	18	18	13
	Southern Registration District.										
13	Belgaum	15	6	1,069	7	1	...	5	1	2	1
14	Dhárwár	18	8	1,277	23	12	11	6	6	5	...
15	Bijápur	13	4	1,128	8	5	2	...	...	1	4
16	Kánara	16	3	1,264	3	...	...	...	...	1	1
	Gujarát Registration District.										
17	Surat	12	6	782	9	...	5	3	5	10	4
18	Broach	19	4	404	4	...	...	...	4	...	...
19	Kaira	15	3	579	8	...	...	2	...	1	...
20	Panch Mahals ...	17	2	668	2	...	...	1	...	1	...
21	Ahmedabad	13	5	871	7	...	2	2	3	1	...
	Sind Registration District.										
22	Karáchi	16	2	793	2	5	9	5	10	9	2
23	Hyderabad	11	2	862	2	...	1	...	...	...	...
24	Thar and Párkar ...	13	...	904	...	...	...	...	...	...	...
25	Nawábsháh	9	3	731	4	1	...	...	1	3	4
26	Lárkána	15	1	763	1	...	...	...	1	...	...
27	Sukkur	12	4	671	5	5	2	1	2	1	...
28	Upper Sind Frontier .	6	1	410	2	6	...	...	...	...	...
	Total for the Presidency.	366	191	26,546	661	113	162	223	335	278	223

N.B.—Small-pox should not include Measles.

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1923.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	Female.	Total.	7 NUMBER OF THESE DEATHS AMONG CHILDREN. Under 1 year.	Under 10 years.	8 TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	Female.	Total.	9 Mean ratio per 1,000 of previous five years.	10 No.
20	14	8	8	13	81	125	105	230	91	96	·23	·20	·21	·42	1
20	27	29	9	93	160	234	241	475	154	288	·76	·79	·78	·94	2
6	8	3	27	156	181	216	249	465	82	334	·51	·61	·56	·16	3
12	16	5	7	11	24	76	74	150	42	80	·20	·20	·20	·16	4
...	1	...	...	...	1	7	8	15	2	10	·08	·13	·10	·08	5
14	10	15	9	15	26	75	76	151	50	92	·27	·27	·27	·15	6
36	6	8	7	12	16	284	191	475	87	152	·38	·48	·41	·50	7
2	1	...	1	7	11	20	23	43	14	20	·06	·06	·06	·15	8
24	17	10	10	35	46	135	125	260	77	130	·27	·26	·26	·23	9
2	...	...	...	2	8	15	10	25	5	10	·04	·03	·03	·29	10
9	4	4	2	4	14	63	63	126	30	59	·12	·12	·12	·07	11
15	7	1	5	8	11	53	59	112	24	40	·10	·10	·10	·13	12
...	2	...	...	1	...	6	7	13	4	6	·01	·01	·01	·12	13
3	4	2	1	...	3	21	32	53	19	17	·04	·06	·05	·15	14
...	2	2	2	...	...	6	12	18	3	7	·01	·03	·02	·12	15
3	...	...	...	...	...	4	1	5	2	...	·02	·01	·01	·54	16
2	...	...	...	...	1	17	13	30	10	13	·05	·04	·04	·10	17
...	...	...	...	...	1	1	4	5	1	3	·00	·03	·02	·04	18
...	1	..	...	14	39	21	36	57	18	35	·06	·11	·08	·08	19
...	..	...	...	...	...	2	...	2	...	1	·01	...	·01	·09	20
...	1	1	...	...	...	5	5	10	2	5	·01	·01	·01	·10	21
1	2	1	...	...	...	28	16	44	5	10	·09	·07	·08	·36	22
...	...	...	...	1	15	10	7	17	2	9	·03	·03	·03	·18	23
...	...	...	...	...	...	...	...	..	...	...	..	...	...	·14	24
...	...	..	...	...	...	3	6	9	1	1	·01	·03	·02	·13	25
...	...	...	...	...		1	...	1	...	1	·00	...	·00	·22	26
...	..	...	...	...	2	7	6	13	1	...	·02	·03	·08	·07	27
...	...	1	...	...	...	3	4	7	...	...	·02	·04	·03	·10	28
169	123	90	88	372	640	1,439	1,373	2,811	726	1,428	·014	0·15	0·15	0·21	

which is called "chota chechuk" in some parts of the country.

ANNUAL FORM No. IX.—DEATHS *registered from* FEVERS *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from fevers were reported.	Number in each District.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	23	23	1,478	1,322	739	782	1,155	1,498	1,643	985
2	West Khándesh ...	10	10	1,242	1,092	767	644	802	742	661	395
3	Násik	19	19	1,667	1,469	1,071	765	974	923	1,072	690
4	Thána	15	15	1,546	1,453	1,625	2,058	2,007	1,192	957	574
5	Bombay Suburban.	5	5	86	75	158	96	153	107	115	91
6	Kolába	14	14	1,482	1,347	1,002	822	974	753	662	435
7	City of Bombay	1	1	1	1	812	299	470	385	364	317
	Central Registration District.										
8	Ahmednagar ...	15	15	1,346	983	549	363	372	396	493	366
9	Poona	20	20	1,157	1,056	863	710	805	745	715	603
10	Sholápur	10	10	718	571	947	814	859	904	957	722
11	Sátára	19	19	1,342	898	813	702	739	927	972	768
12	Ratnágiri	15	15	1,305	1,088	670	362	938	775	699	560
	Southern Registration District.										
13	Belgaum	15	15	1,069	905	536	439	533	615	546	430
14	Dhárwár	18	18	1,277	1,170	897	790	1,059	1,167	1,058	676
15	Bijápur	13	13	1,128	1,042	872	717	835	948	806	538
16	Kánara	16	16	1,264	947	586	459	457	355	346	303
	Gujarát Registration District.										
17	Surat	12	12	782	660	757	848	1,005	652	541	363
18	Broach	9	9	404	382	443	439	469	486	452	336
19	Kaira	15	15	579	548	370	459	972	967	693	546
20	Panch Maháls ...		7	668	574	291	264	483	550	493	321
21	Ahmedabad ...	13	13	871	853	979	1,163	1,801	1,654	1,162	801
	Sind Registration District.										
22	Karáchi	16	16	793	771	359	330	335	279	301	247
23	Hyderabad ...	11	11	862	862	619	402	520	385	317	307
24	Thar and Párkar...	13	13	904	904	454	4·7	492	310	322	225
25	Nawabshah ...	9	9	731	731	412	285	341	302	290	215
26	Lárkána	15	15	763	763	705	375	468	408	537	353
27	Sukkur	12	12	671	671	607	474	470	546	601	501
28	Upper Sind Frontier	6	6	410	410	294	183	203	129	159	151
	Total for the Presidency ...	366.	366	26,546	13,548	18,397	16,951	2[illegible],696	19,120	17,934	12,819

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1923.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	Female.	Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	Female.	Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
596	887	1,232	1,153	910	810	6,290	6,100	12,390	11·53	11·51	11·53	28·04	1
307	486	603	690	593	630	3,633	3,687	7,320	11·73	12·16	11·94	28·09	2
611	766	848	8·8	726	669	5,236	4,757	9,993	12·51	11·70	12 11	31·67	3
494	699	678	815	770	869	6,560	6,178	12,738	16·89	16·76	16·83	30 10	4
104	125	97	117	92	107	762	600	1,362	8·70	9·39	9·00	11·04	5
513	607	639	702	735	834	4,473	4,205	8,678	16·01	14·85	15·43	29·14	6
210	273	292	307	252	332	2,207	1,606	3,813	2·93	4·05	3·32	5·25	7
404	500	461	476	395	322	2,620	2,407	5,697	7·41	6·67	7·04	24·86	8
714	913	798	863	827	859	5,073	4,347	9,420	10·43	8·92	9·53	23·06	9
793	1,077	948	973	827	690	5,323	5,188	10,511	13·92	14·44	14·17	32·15	10
821	966	943	945	850	742	5,414	4,774	10,188	10·59	9·28	9·93	27·88	11
619	536	612	687	706	827	4,283	4,408	8,691	8·15	7·01	7·53	17·62	12
404	480	473	510	470	456	3,106	2,786	5,892	6·41	5·99	6·20	16·05	13
724	876	939	1,055	1,145	1,132	5,811	5,707	11,518	11·00	11·24	11·12	17·50	14
554	590	667	689	704	660	4,336	4,214	8,580	10·70	10·80	10·47	26·27	15
316	320	278	258	335	353	2,198	2,198	4,396	10·78	11·13	10·95	18·91	16
374	429	407	391	381	335	3,210	3,326	6,536	9·52	9·87	9·70	16·03	17
276	376	386	361	292	269	2,283	2,302	4,585	14·40	15·43	14·90	21·63	18
398	450	535	502	408	421	3,455	3,286	6,741	9·10	9·02	9·48	16·46	19
257	334	434	504	367	340	2,324	2,314	4,638	12·02	12·75	12·37	18·74	20
511	643	522	745	718	807	6,054	5,752	11,806	12·78	13·89	13·30	21·67	21
167	175	212	263	401	447	1,969	1,547	3,516	6·49	6·78	6·63	17·97	22
232	242	315	383	509	578	2,758	2,051	4,809	8 71	8·19	8·48	24·61	23
217	205	265	316	455	571	2,368	1,870	4 238	11·78	10·67	10 69	28·6	24
154	164	209	404	44	447	2,068	1,100	3,668	8·84	8·66	8 76	27·55	25
308	279	450	518	667	563	3,110	2,526	5,636	9·39	9·47	10·02	21 91	26
466	373	464	805	812	902	3,777	3,244	7,021	13·42	14·24	13·78	26·96	27
106	119	147	281	423	250	1,435	1,015	2,450	10·68	9·55	10 18	26·21	28
11,650	13,900	15,154	16,590	16,213	16,307	1,02,206	94,025	196,231	10·17	10·31	10·24	23·06	

ANNUAL FORM No. X.—DEATHS *registered*
PRESIDENCY *during each*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each district.	Number from which deaths from Dysentery and Diarrhœa were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	23	23	1,478	272	36	35	31	59	72	52
2	West Khándesh ...	10	10	1,242	75	17	11	12	8	7	4
3	Násik	19	19	1,667	291	50	43	53	57	74	61
4	Thána	15	14	1,546	113	21	27	26	12	16	16
5	Bombay Suburban ...	5	3	86	26	13	7	8	13	3	8
6	Kolába...	14	14	1,482	186	33	26	21	18	16	22
7	City of Bombay ...	1	1	1	1	300	250	244	240	231	202
	Central Registration District.										
8	Ahmednagar	15	15	1,346	640	112	95	95	102	116	163
9	Poona	20	20	1,157	469	105	93	80	94	119	129
10	Sholápur	10	10	718	381	143	118	91	76	147	120
11	Sátára	19	19	1,342	567	104	100	64	105	141	136
12	Ratnágiri	15	15	1,305	348	93	54	46	71	53	32
	Southern Registration District.										
13	Belgaum	15	15	1,069	498	144	127	120	153	175	195
14	Dhárwár	18	18	1,277	284	60	57	67	65	94	62
15	Bijápur	13	13	1,128	435	100	77	69	72	67	75
16	Kánara	16	16	1,264	261	83	72	50	40	39	40
	Gujarát Registration District.										
17	Surat	12	12	782	130	39	37	37	48	57	44
18	Broach...	9	8	404	82	13	9	20	11	26	16
19	Kaira	15	14	579	198	30	34	45	69	66	77
20	Panch Maháls ...	7	6	668	68	4	7	5	6	21	7
21	Ahmedabad ...	13	12	871	162	59	49	44	48	64	57
	Sind Registration District.										
22	Karáchi	16	9	793	6	11	7	11	28	20	17
23	Hyderabad	11	9	962	11	12	7	7	9	3	8
24	Thar and Párkar ...	13	9	904	9	2	...	2	3	...	...
25	Nawabshah	9	5	731	6	1	1	...	...	...	1
26	Lárkána	15	7	763	7	2	...	3	...	2	1
27	Sukkur	12	9	671	11	4	4	1	...	5	5
28	Upper Sind Frontier .	6	4	410	4	...	...	..	...	2	...
	Total for the Presidency	386	329	26,546	5,541	1,590	1,347	1,252	1,407	1,628	1,550

from DYSENTERY *and* DIARRHŒA *in the* DISTRICTS *of the* BOMBAY *month of the year 1923.*

July.	August.	September.	October.	November.	December.	6 Total. Male.	6 Total. Female.	6 Total. Total.	7 Ratio of Deaths per 1,000 of Population. Male.	7 Ratio of Deaths per 1,000 of Population. Female.	7 Ratio of Deaths per 1,000 of Population. Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
69	171	149	104	47	54	447	432	879	·83	·81	·82	1·16	1
18	26	30	17	17	10	96	81	177	·31	·27	·29	·59	2
62	124	88	85	59	48	463	341	804	1·11	·84	·98	1·40	3
20	38	23	11	18	25	147	106	253	·37	·29	·33	·75	4
20	20	21	11	9	15	86	62	148	·98	·97	·98	0·96	5
35	54	34	19	16	22	173	143	316	·62	·51	·56	1·23	6
283	379	327	253	244	314	1,913	1,344	3,257	2·54	3·39	2·84	3·69	7
195	289	254	219	147	117	1,058	856	1,914	2·02	2·37	2·64	2·90	8
191	276	206	157	120	120	946	744	1,690	1·89	1·53	1·72	2·44	9
211	403	359	219	157	110	1,136	1,018	2,154	2·97	2·83	2·91	2·56	10
210	298	230	182	121	85	911	865	1,776	1·78	1·68	1·73	2 23	11
82	124	101	79	86	93	517	395	912	0·98	0·62	0·79	1·09	12
186	220	197	222	165	166	962	1,108	2,070	1·99	2·38	2·18	2·93	13
85	108	91	110	79	85	491	472	963	·93	·93	·93	1·31	14
96	149	136	154	134	98	585	642	1,227	1·44	1·64	1·54	2 48	15
67	88	81	63	58	47	357	371	728	1·75	1·88	1·81	2·53	16
55	77	66	39	33	36	503	265	508	·99	·79	·84	1·04	17
16	37	27	18	12	19	110	114	224	·69	·76	·73	·89	18
74	92	116	72	35	31	388	353	741	1·02	1 07	1·04	1·16	19
10	34	27	23	15	8	94	73	167	·49	·40	·44	·69	20
57	120	121	79	53	47	455	343	798	·96	·83	·90	1·22	21
23	34	43	21	20	18	148	105	253	·49	·44	·48	·35	22
9	12	13	11	9	7	64	43	107	·20	·17	·19	·21	23
...	1	...	1	2	1	9	3	12	·04	·02	·13	·05	24
2	...	2	...	4	...	9	2	11	·04	·01	·03	·04	25
2	1	1	1	4	3	15	5	20	·05	·03	·4	·04	26
1	4	6	5	19	11	42	23	65	·15	·10	·13	13	27
...	...	1	...	1	...	4	...	4	03	...	·02	·05	28
2,079	3,189	2,750	2,175	1,683	1,590	11,929	10,309	22,238	1·19	1·13	1·16	1·53	

ANNUAL FORM No. XI.—DEATHS *registered from* RESPIRATORY *month of the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.	Number in each District.	Number from which deaths from Respiratory Diseases were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	23	23	1,478	849	364	321	339	356	271	147
2	West Khándesh ...	10	10	1,242	567	212	201	215	201	153	82
3	Násik ...	19	19	1,667	895	437	310	376	281	320	201
4	Thána ...	15	15	1,516	397	124	149	185	116	116	76
5	Bombay Suburban ...	5	5	86	41	26	31	36	25	22	35
6	Kolába ...	14	14	1,482	487	119	109	111	104	117	78
7	City of Bombay ...	1	1	1	1	326	1,286	1,655	1,521	1,387	1,127
	Central Registration District.										
8	Ahmednagar ...	15	15	1,346	972	432	293	309	297	308	227
9	Poona ...	20	20	1,157	736	584	415	459	423	395	330
10	Sholápur ...	10	10	718	379	271	237	186	175	165	128
11	Sátára ...	19	19	1,342	534	188	166	170	153	190	136
12	Ratnágiri ...	15	15	1,305	996	484	314	383	388	378	323
	Southern Registration District.										
13	Belgaum ...	15	15	1,069	681	313	282	249	251	229	161
14	Dhárwár ...	18	18	1,277	709	326	287	363	311	279	216
15	Bijápur ...	13	13	1,128	598	273	211	178	187	198	119
16	Kánara ...	16	16	1,264	311	78	54	77	56	63	36
	Gujarát Registration District.										
17	Surat ...	12	12	782	653	842	724	1,102	674	566	420
18	Broach ...	9	9	404	335	271	361	376	296	249	174
19	Kaira ...	15	14	579	522	458	494	722	642	585	433
20	Panch Mahals ...	7	7	668	372	93	103	194	124	94	61
21	Ahmedabad ...	13	13	871	549	702	831	886	733	618	395
	Sind Registration District.										
22	Karáchi ...	16	16	798	36	239	211	205	161	133	125
23	Hyderabad ...	11	10	862	44	119	113	116	96	113	48
24	Thar and Párkar ...	13	13	904	113	93	72	121	60	13	6
25	Nawábshah ...	9	9	731	54	47	29	25	30	18	7
26	Lárkána ...	15	14	761	21	14	12	20	17	18	6
27	Sukkur ...	12	12	671	17	13	7	15	8	14	8
28	Upper Sind Frontier.	6	5	410	6	6	3	...	4	3	...
	Total for the Presidency.	366	362	26,546	11,875	8,454	7,625	9,103	7,607	7,010	5,105

DISEASES *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each year 1923.*

						6			7			8	9
						Total.			Ratio of Deaths per 1,000 of Population.				
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
166	226	206	200	282	300	1,826	1,532	3,358	3·35	2·89	3·12	4·49	1
88	100	110	132	149	153	1,005	826	1,831	3·25	2·73	2·99	3·43	2
194	286	302	331	309	306	1,880	1,773	3,653	4·49	4·35	4·42	5·18	3
88	107	107	106	109	134	824	593	1,417	2·13	1·61	1·87	1·80	4
23	28	31	23	24	26	189	141	330	2·16	2·21	2·18	2·01	5
73	89	96	97	105	102	710	490	1,200	2·54	1·73	2·13	2·35	6
1,149	1,261	1,162	1,127	1,067	1,180	8,672	6,376	15,248	11·80	16·07	13·27	21·08	7
265	330	343	407	356	348	1,939	1,976	3,915	5·34	5·47	5·41	5·83	8
361	478	486	524	512	504	2,764	2,707	5,471	5·52	5·56	5·54	6·99	9
171	195	207	195	231	231	1,146	1,246	2,392	3·00	3·47	3·23	2·78	10
161	193	179	218	227	191	1,085	1,114	2,199	2·12	2·17	2·15	1·87	11
342	398	403	455	470	439	2,593	2,104	4,697	4·93	3·34	4·07	4·55	12
200	239	240	257	294	251	1,539	1,427	2,966	3·18	3·07	3·12	3·34	13
207	293	316	285	350	293	1,686	1,838	3,524	3·19	3·63	3·40	3·71	14
133	177	186	207	235	218	1,283	1,039	2,322	3·11	2·66	2·92	3·25	15
51	44	58	60	53	77	405	302	707	1·99	1·53	1·76	1·64	16
399	441	447	443	536	512	3,880	3,231	7,111	11·50	9·51	10·55	11·03	17
147	232	233	230	210	200	1,597	1,382	2,979	10·07	9·27	9·68	9·88	18
360	472	560	584	450	474	3,559	2,684	6,243	9·37	8·10	8·78	9·67	19
49	74	83	66	82	100	723	405	1,128	3·74	2·23	3·01	2·98	20
360	564	673	545	571	591	4,256	3,292	7,478	8·84	7·05	8·42	9·87	21
142	123	157	142	204	374	1,309	907	2,216	4·31	3·98	4·17	2·89	22
32	31	5	49	66	121	522	42	958	1·68	1·70	1·68	2·21	23
11	16	8	16	20	34	289	183	472	1·44	1·04	1·19	·95	24
9	8	6	12	10	9	134	75	209	·57	·41	·50	·54	25
6	5	3	6	4	15	83	43	126	·25	·17	·22	·32	26
6	8	10	8	14	40	109	42	151	·38	·18	·29	·41	27
...	3	...	...	3	11	23	10	33	·17	·09	·13	·19	28
5,211	6,424	6,758	6,800	6,943	7,234	46,170	38,164	84,334	4·59	4·19	4·40	5·05	

ANNUAL FORM No. XII.—DEATHS *registered from* PLAGUE *in the*

1	2	3		4		5					
		CIRCLES OF REGISTRATION.		VILLAGES.							
No.	Districts.	Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.	January.	February.	March.	April.	May.	June.
	Western Registration District.										
1	East Khándesh ...	23	20	1,478	169		514	793	187	21	...
2	West Khándesh ..	10	5	1,242	7	...	1	1	...	...	...
3	Násik ..	19	3	1,667	3	...	3	5	1	...	...
4	Thána ..	15	11	1,546	56	80	82	112	50	27	27
5	Bombay Suburban ..	5	4	86	13	8	6	24	46	32	4
6	Kolába ..	14	7	1,482	21	12	15	51	9	3	...
7	City of Bombay ..	1	1	1	1	25	95	388	423	294	33
	Central Registration District.										
8	Ahmednagar ..	15	6	1,346	13	1	2	21	2	1	...
9	Poona ...	20	16	1,157	125	452	339	276	120	25	10
10	Sholápur ...	10	7	718	86	63	94	107	180	63	7
11	Sátára ...	19	18	1,342	271	194	197	197	156	62	35
12	Ratnágiri ...	15	5	1,305	14	5	2	12	10	5	...
	Southern Registration District.										
13	Belgaum ...	15	15	1,069	224	317	232	294	351	184	142
14	Dhárwár ...	18	17	1,277	295	585	360	474	240	138	157
15	Bijápur ...	13	10	1,128	21	8	4	14	...	...	...
16	Kánara ..	16	5	1,264	19	15	15	21	34	25	11
	Gujarát Registration District.										
17	Surat ...	12	7	782	8	11	5	10	1	1	1
18	Broach ...	9	...	404	...	...	...	...	...	...	...
19	Kaira ...	15	1	579	1	...	...	...	1	...	...
20	Panch Mahals ...	7	1	668	1	...	...	...	...	...	1
21	Ahmedabad ...	13	1	871	1	...	...	1	2	1	...
	Sind Registration District.										
22	Karáchi ...	16	4	793	3	2	10	45	94	136	29
23	Hyderabad ...	11	2	862	2	...	...	1	...	...	2
24	Thar and Párkar ...	13	...	904	...	...	...	...	...	...	...
25	Nawábshah ...	9	2	731	2	...	...	6	...	...	...
26	Lárkána ...	15	...	763	...	...	...	...	...	...	...
27	Sukkur ...	12	1	671	1	...	...	...	...	...	...
28	Upper Sind Frontier.	6	...	410	...	...	...	...	...	...	...
	Total for the Presidency ...	366	169	26,546	1,357	2,101	2,006	2,843	1,947	1,013	459

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Government of Maharashtra
on 22 July, 2017

DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1923.*

July.	August.	September.	October.	November.	December.	6 TOTAL. Male.	Female.	Total.	7 RATIO OF DEATHS PER 1,000 OF POPULATION. Male.	Female.	Total.	8 Mean ratio per 1,000 of previous five years.	9 No.
...	125	482	659	345	297	1,949	1,927	3,776	3·39	3·61	3·51	1·74	1
...	1	6	14	22	5	26	24	50	·08	·0	·08	2·24	2
...	...	1	1	...	...	6	5	11	·01	·01	·01	·58	3
21	24	46	9	8	10	269	227	496	·69	·61	·65	·38	4
1	5	10	3	...	...	77	62	139	·86	·97	·91	·59	5
...	...	...	1	...	8	65	34	99	·23	·11	·17	·18	6
13	16	22	12	2	4	941	386	1,327	1·25	·97	1·16	·69	7
...	...	6	10	18	15	33	33	66	0·09	0·09	0·09	·17	8
32	85	284	340	154	68	1,086	1,099	2,185	2·17	2·26	2·21	·94	9
21	467	753	654	265	267	1,399	1,545	2,944	3·66	4·30	3·97	·76	10
140	633	1,260	2,372	1,479	771	3,430	4,056	7,486	6·71	7·88	7·30	2·83	11
30	47	9	9	6	50	94	91	185	0·17	0·14	0·16	0·16	12
274	567	1,117	1,288	726	362	2,824	3,030	5,854	5·83	6·52	6·17	1·70	13
395	1,103	1,932	1,608	643	308	3,878	4,105	7,983	7·34	8·08	7·70	3·02	14
...	2	24	67	105	114	149	189	338	·37	·48	·43	·91	15
31	33	47	14	17	13	144	132	276	·71	·67	·69	·16	16
1	...	...	...	...	...	15	15	30	·04	·04	·04	·77	17
...	...	...	...	...	...	...	...	...	...	...	...	1·65	18
...	...	...	...	...	...	1	...	1	·00	...	·00	4·28	19
...	...	...	...	...	...	...	1	1	...	·01	·00	1·10	20
...	...	...	...	...	...	4	...	4	·01	...	·01	2·71	21
35	22	52	18	25	10	283	195	478	·93	·87	·90	1·22	22
...	...	...	...	...	...	...	3	3	...	·01	·01	·75	23
...	...	...	...	...	...	...	...	...	...	...	...	·01	24
...	...	...	1	1	...	8	...	8	·03	...	·02	·04	25
...	...	...	...	...	...	...	...	...	...	...	...	·06	26
...	...	1	...	...	...	1	...	1	·00	...	·00	·48	27
...	...	...	...	...	...	...	...	...	...	...	...	·07	28
997	3,130	6,052	7,070	3,816	2,302	16,582	17,159	33,741	1·65	1·88	1·76	1·19	

P 1—15 *ap*

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